

Enterprise-Wide Risk Management (EWRM): Identification, Analysis and
Management of Implementation Barriers within an African
Telecommunications Enterprise

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Submitted for the Degree of Doctor of Business Administration

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April, 2013

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ABSTRACT

This research study investigated the implementation barriers associated with the introduction of EWRM within an African telecommunications enterprise. Six research questions were developed from the literature which provided a focus for data collection.

Based on MTN Group, a single case study method was adopted. Three sub-cases of MTN companies formed the main data sources. In-depth interviews were conducted with senior and middle level management of each sub-case. The research design was based on the established procedures and quality controls associated with qualitative case study method within a critical realism paradigm. Analysis was based primarily on in-case and intra-case analyzes and pattern matching for the purpose of analytic generalization about the research questions.

The study concluded that to overcome the implementation barriers people need a platform where they can share knowledge and be rewarded for knowledge transfer, additionally key performance indicators (KPI's) linked to knowledge transfer and sharing must also be created and utilized.

Ultimately, this study has contributed to EWRM implementation strategies for MTN and the creation of associated KPI metrics; both the researcher and MTN consider the research and its outcomes to have been advantageous. More generally the research has also contributed to the wider risk management debate, shedding light on barriers to implementation and suggesting holistic strategies that should embed EWRM more effectively and efficiently.

DEDICATION

This thesis is dedicated to the memory of my late maternal Grandmother: Madalina

ACKNOWLEDGMENTS

I would like to acknowledge contributions from many people without whose support this thesis would not have been completed. I wish to particularly express my deepest gratitude to my Supervisor Prof. Robert Paton for all his support, guidance and encouragement. I would also like to thank Prof. Neil Kay, who mentored me through the research proposal for this study.

My thanks also go to all the Chief Executive Officers (CEO's) of the Case- Companies, and the interviewees who provided valuable time and information. Special thanks go to the former Vice- President of the MTN group who introduced me to the CEO's and the Executive Director MTN Group Business Risk management who provided invaluable support. I thank all my friends and colleagues at my place of work. Finally, I would like to express my special thanks to my maternal uncle Claver for his inspiration in my childhood education, my wife Mary, and my children: Annette, Phillip and Timothy, for their continuous care, love, and support.

RESEARCH THESIS SUBMISSION

ACADEMIC REGISTRY
Research Thesis Submission



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CHAPTER 1 - INTRODUCTION

This introductory chapter provides the background to the research study, the research problem and associated questions, the justification and significance, the brief description of the methodology, scope and limitations and finally an outline of the structure. Key definitions are presented in Appendix L.

1.1 Background

Recent socio-economic turmoil has increased the need for enterprises including those in the telecommunications industry to develop risk management competencies (Ernst & Young, 2008; KPMG, 2010). Risk management has become much more than a compliance routine (Beasley, S.M., et al. 2010). It may be viewed as an approach designed to reduce the uncertainty of a company achieving its objectives (KPMG, 2000). Potential risk is created by any exception or deviation in a process that could impact a company's ability to meet its goals (KPMG, 2000; Fraser, J., Simkins, J. B. 2010).

The practice of risk management is challenged by a compliance function mentality of avoiding down side risks at the expense of not focusing on opportunities to improve performance- upside risks (KPMG 2000). Additionally, risks are managed in silos where by the big picture is missed (Acharyya, M.2006) as very few people are involved, thus risk management doesn't become embedded into the organizational culture (McDermott, R; O'Dell, C.2001; Blackhurst, J. 2006; McLaughlin, S. et.al. 2008).

EWRM requires that all enterprise risks be considered in relation to each other to create a consolidated risk profile. EWRM approach expands the scope of risk management practices beyond the physical and financial exposures to include issues such as long-term strategy, competitor response, human capital, and operational exposures (PwC, 2003). It can potentially identify situations in which risk can lead to competitive advantage (Fraser, J., Simkins, J. B. 2010).

The Committee of Sponsoring Organizations (COSO) of the Treadway Commission (COSO-ERM.2004) uses the phrase '*Enterprise Risk Management -ERM*' instead of '*Enterprise-Wide Risk Management-EWRM*'; however, the two mean the same thing and are used interchangeably in the literature. The researcher chose to use the latter in this study as it

captures the attention of the reader with respect to the ‘wideness’ of ERM. COSO-ERM (2004: pp2) defines ERM (EWRM) as:

“a process, effected by an entity’s board of directors, management, and other personnel, applied in a strategy setting and across the enterprise, designed to identify potential events that may affect the entity and manage risk to be within its risk appetite to provide reasonable assurance regarding the achievement of organizational objectives”

Institute of Internal Auditors- IIA (2009:pp2) defines EWRM as:

“a structured, consistent and continuous process across the whole organization for identifying, assessing, deciding on responses to and reporting on opportunities and threats that affect the achievement of its objectives”.

COSO-ERM (2004) frame work has been adopted in this study as justified in Sub –section 2.3.3.

EWRM, when designed as defined above, implemented comprehensively and systemically, it can change future outcomes of any business enterprise (KPMG, 2000; D’Arcy, S.P. 2001). When it is practiced fully, EWRM does not only help protect businesses from setbacks, it enables better overall business performance.

Previous surveys conducted by practitioners and a limited number of academic researchers (Corporate Executive Board, 2004; Slywotzky, A. 2004; Acharyya, M.2006; Calandro Jr. J., Lane, S. 2006; Havenga, A., Venter, P. 2007; Hexter, E; et al. 2008; Deloitte, 2008; PWC, 2009; Zand, D.E. 2009; Economist, 2009; Beasley, M.S., et al. 2010; Fraser, J., Simkins, J. B. 2010) found that the EWRM framework was at a cross-road in terms of implementation maturity levels. The understanding of the EWRM by business managers was clouded by misconceptions (Acharyya, M., Johnson, J. 2006; Fraser, J., Simkins, J. B, 2007) about both the approach and the process that became obstacle to successful implementation. Relatively few organizations (Hexter, E; et al, 2008) understood the importance of developing an EWRM approach (Slywotzky, A. 2004; Calandro Jr. J., Lane, S. 2006; PWC, 2009; Zand, D.E. 2009; Economist, 2009). There is much confusion about what is meant by EWRM (Deloitte, 2008); and organizations are struggling with defining their programs: how to start and demonstrate the value of improved risk management.

Telecommunication operators in Africa and elsewhere face a number of strategic and operational risks such as: regulatory compliance, price wars, technological convergence, innovation, and technology change (Garcia-Murillo, M; MacInnes, I. 2002; ITU, 2007; Ernst & Young, 2008, 2009, 2012). How they respond to such risks will determine their competitive advantages. From the EWRM perspective, each of the said risks needs to be assessed in terms of relative importance to enterprise's strategic goals and objectives. EWRM framework has emerged as an approach that reviews risks from the enterprise-wide perspective. DeLoach, J.W (2000:pp5), defines EWRM as “a structured disciplined approach that aligns strategy, processes, people, technology and knowledge with the purpose of evaluating and managing the uncertainties the enterprise faces as it creates value”.

1.2 Research Problem and Questions

Arising from literature in Chapter Two, Section 2.5 and the above background discussion, the key research problem for this study is: ***‘What are the Implementation Barriers to the Introduction of Enterprise-Wide Risk Management (EWRM) In an African Telecommunications Enterprise?’***

To answer the problem, the following specific research questions (RQ) were developed from the literature:

- **RQ1.** What are senior executive and mid level management perceptions and understanding of an EWRM? (Sub-Section 2.5.1.1)
- **RQ2.** What are the potential motivators for EWRM implementation? (Sub-Section 2.5.1.2)
- **RQ3.** What are the principal risks associated with introducing an EWRM and how may they be managed? (Sub-Section 2.5.1.2)
- **RQ4.** Describe any anticipated barriers to EWRM implementation. (Sub-Section 2.5.1.2)
- **RQ5.** Would knowledge sharing and enhanced communication assist in overcoming the EWRM implementation barriers? (Sub-Section 2.5.1.3)
- **RQ6.** What strategies could be adopted to overcome the implementation barriers associated with EWRM? (Sub-Sections 2.3.4 and 2.5)

These research questions formed the basis for the data collection and analysis in Chapter Four.

1.3 Justification for the Research

This research investigates the implementation barriers of EWRM, in an African Telecommunications Enterprise with reference to the MTN group- African operations. It is justified on basis of gaps in the literature review established in Chapter Two, Section 2.5.2.

There is a body of knowledge on EWRM from surveys and case studies. However, there are gaps in the literature with respect to the implementation barriers of EWRM in an African Telecommunications Enterprise. This study contributes to the existing body of knowledge that seeks to establish the degree of alignment between theory and the application of EWRM in telecommunications enterprise. EWRM has been studied for some time now, however, studies focused more on financial institutions-banks and insurance firms (Acharyya, M.2006). By focusing on telecommunications, this study will contribute to both practice and academic literature by broadening the debate and assessing repercussions beyond finance.

From the theory and practice perspective, the implementation barriers would have the following implications: firstly, a more precise knowledge base to minimize implementation barriers in future projects. It will give rise to creation of a best practice model for the telecommunications firms. Secondly, the results of the research will help to pinpoint some of the specific areas of limitation faced by telecommunications industry in the EWRM implementation.

African Telecommunications Enterprises play a big role in the contribution to the African national economies in terms of skills transfer, taxes and employment (Mauro, D.M., et al. 2008). Waverman, L., et al. (2005) observed:

“a developing country that had an average of 10 more mobile phones per 100 populations between 1996 and 2003 would have enjoyed per capita GDP growth that was 0.59 percent higher than an otherwise identical country”.

However, much as there was a positive correlation between the numbers of mobile phones per 100 populations and the size of the GDP growth, this could not mean that bringing more mobile phones per 100 populations would necessarily cause the GDP growth to increase as there are other variables that can influence the growth in GDP.

Thus, successful implementation of EWRM would indirectly impact on the economies of the countries.

1.4 Research Methodology

The data collection methodology is detailed in Chapter Three Section 3.2 and discusses realism as the scientific research paradigm appropriate for this study (Carson, D. J., et al. 2001). In Section 3.3, the choice of case study method is justified as a rigorous empirical inquiry appropriate for this study, while in Section 3.4, a range of criteria (Cohen, L., et al. 2007; Yin, R.K.2009) for judging the quality of case study design is presented.

1.5 Scope and limitations of the Study

There are a number of limitations embedded in the nature and scope of this study. This study focuses on a specific geographical region and the sample of the study is limited to an African Telecommunications Enterprise. The study is that of a single case with multiple-embedded Sub-cases, thus scientific generalization is not possible. The researcher chose three embedded cases for this single case study. They were chosen on the basis of subscriber-numbers criteria used in the MTN Group where Sub-Cases: X is small, Y is medium and Z is large, as presented in Chapter 4, Sub-Section 4.2.1.

However, all these concerns are comprehensively addressed in the research design itself (Gummesson, E. 2000; Cohen, L., et al. 2001; Yin, R.K.2009) in Section 3.4 and the research design meets the criteria for trustworthiness, including the dimensions of credibility, dependability and conformability.

1.6 Structure of the Thesis

This thesis is organized into five chapters, following a widely-accepted model of presenting doctoral work (Perry, C. 1998).

Chapter One: begins with the introduction, and outlines the background to the research study in relation to the research problem on the EWRM implementation barriers in an African Telecommunications Enterprise.

Chapter Two: provides a review of the literature on the background theories of risk management. Section 2.3 highlights the evolution process towards EWRM and explains the contributing forces to the EWRM. The EWRM Framework is presented in Sub-Section 2.3.3 and its integration into the management activities discussed in Sub-Section 2.3.4. Research and case studies in EWRM are presented in Sub-Section 2.3.5. The issues of change and knowledge sharing in relation to EWRM framework are discussed in Section 2.4. The

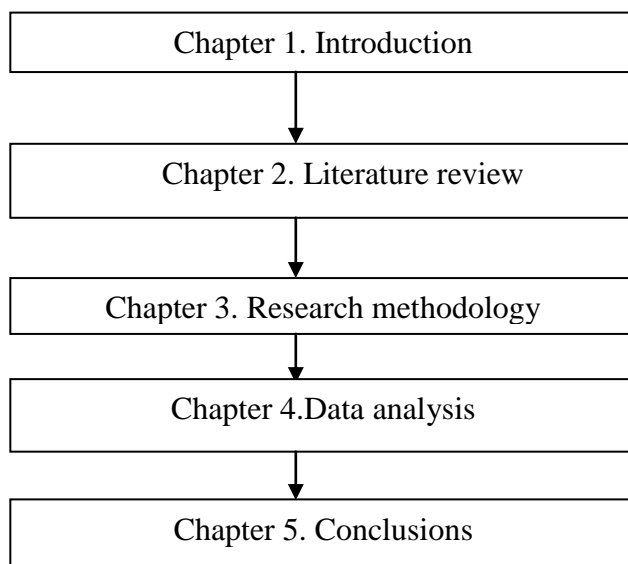
information from the Sections is then used to develop research questions in Section 2.5. Conclusions are drawn in Section 2.6.

Chapter Three: sets out the research philosophy and strategy, discusses methodological considerations and explains justification for the research design adopted, procedures and instruments.

Chapter Four: presents the analysis of data collected from the respondents of selected case-companies. Each of the six research questions was analyzed, interpreted, and the detailed findings presented. The chapter concludes with a summary of the research findings.

Chapter Five: provides a discussion of the findings and conclusions of the research problem and questions. Discusses the contribution of the research findings to the literature and knowledge base, reviews the implications of the findings, discusses the limitations, and concludes with suggested directions for future research. The five chapters are illustrated in the chapter outline below:

Figure 1. 1: Chapter Outline



(Source: Developed for this research)

1.7 Key Definitions.

Definitions adopted by researchers are often not uniform. Key terms for this thesis are outlined in Appendix L.

1.8 Conclusion

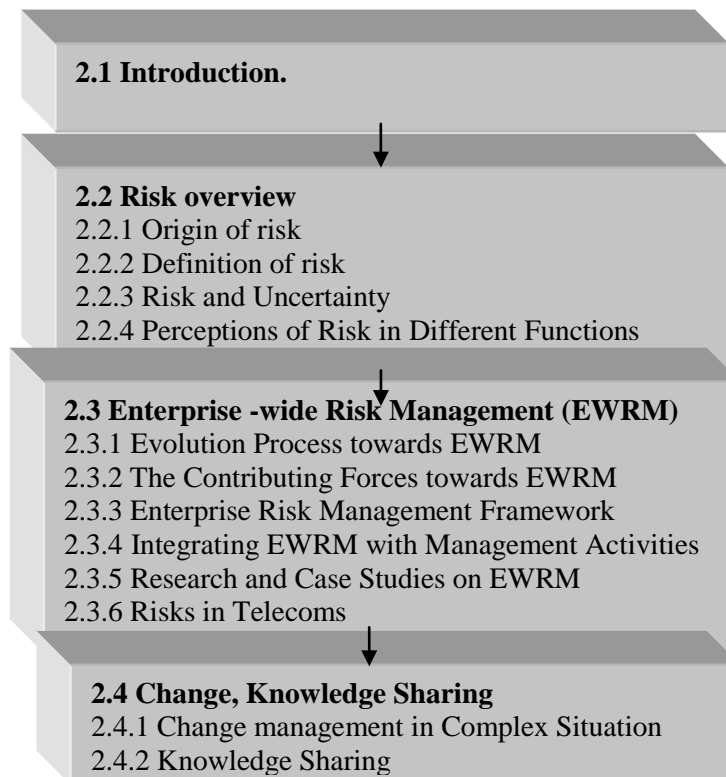
This chapter has laid the foundations for the thesis. It has attempted to introduce the research intent and the significance of the research, the research methodologies, the scope and limitations of the research. The structure of the thesis has been outlined, and key definitions presented in Appendix L. Based on these foundations, the study proceeds to the literature review in Chapter Two.

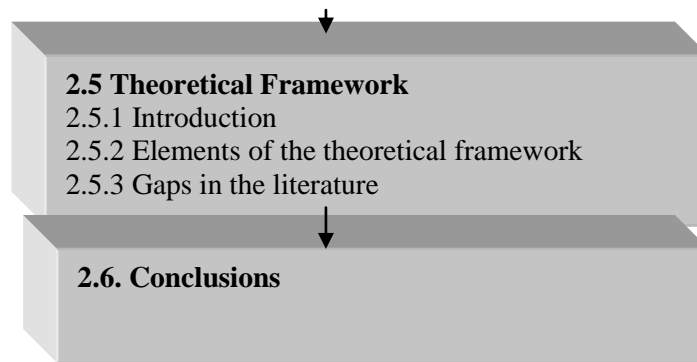
CHAPTER 2 - LITERATURE REVIEW

2.1 Introduction

The previous chapter introduced and outlined the structure of this study. The purpose of this chapter is to review the existing literature in order for the researcher to identify the main issues and build a conceptual model for this research. The chapter is organized into six sections as shown in Figure 2.1. In Section 2.2, risk over view is undertaken and issues of definition and perceptions of risk are highlighted. Arising from Section 2.3, Sub-sections 2.3.1 and 2.3.2, the evolution process towards EWRM is presented as well as the contributing forces to towards the EWRM. The EWRM framework is reviewed in Sub-Section 2.3.3. Sub-Section 2.3.4 reviews the strategic factors for integrating EWRM into management activities. Sub- section 2.3.5 reviews the research and case studies in EWRM. Risks in telecoms are highlighted in Sub-Section 2.3.6. Section 2.4, reviews the issues of change and knowledge sharing in relation to EWRM. Each Section is followed by a section- summary which wraps up the key points raised. In section 2.5 research questions are developed and conclusions are drawn in Section 2.6.

Figure 2. 1: Outline of Chapter 2





Source: Developed for this research

2.2 Risk Overview

This Section briefly presents an overview of risk from the point of researchers including risk perception by people from different functions. It ends with a summary of the key points.

2.2.1 Origin of risk

The word risk is said to have originated either from the Arabic word ‘risq’ or Latin ‘riscum’ (Brackshaw, T; Crawford, G. 2009-pp179). Whereas, the Latin word ‘riscum’ refers to a challenge, this has a connotation of fortuitous and un-favorable event. The modern French word ‘risqué’ has mainly negative but occasionally positive connotations (Merna, T., Al-Thani, F.2008:pp9-10). The modern English word ‘risk’ was first used in a formal legal sense in insurance documents that date to around 1730. However, risk has become very important as result of increasing pace of innovation and change in technology, customer demands, market globalization, corporate governance and compliance, complex financial instruments and the speed of communications (Chapman, J.R. 2006:pp3-9; Collier. P. M. 2009: pp/ix-xi), also risk can come from within as the business strives to grow. All these put risk management high on the agenda of those companies that have taken steps to manage risks. Hence, in pursuit of business opportunities, companies have had to exercise risk judgment and risk acceptance procedures.

2.2.2 Definition of Risk.

There is no universally accepted definition of risk in the available literature. However, differences occur in context and purpose of use. According to Hagigi, M., Sivakumar, K. (2009:pp286):

“understanding risk is the first step in effectively managing it. While risk is universal, there is no single accepted definition of risk. Broadly, definitions of risk vary to include the potential for adverse or negative outcomes in some definitions to the

presence of variability in expected outcomes in others. The difficulty in defining risk has implications for managing risk. For a firm to successfully manage risk, it has to first define and understand its risk”.

Anderson, R. (2006: pp19), defines risk as:

“an event which may occur in the future and which if it happens might impact on the ability of the organization to achieve its objective”;

McNamee, D., Selim. G. M. (1998: pp2) equips:

“risk can be viewed as a concept used to express uncertainty about events and or their outcomes that could have a material effect on the organization’s goals”.

Institute of Risk Management-IRM (2002:pp2); defines risk as:

“the combination of probability of an event and its consequences, with risk management being concerned with both positive and negative or downside”.

Rowe (1977) and Rescher (1983) as referred in Merna, T., Al-Thani, F. (2008: pp10) respectively, defined risk as:

“the potential for unwanted negative consequences of an event or activity”, and “risk is the chancing of negative outcome, and to measure risk we must accordingly measure both defining components and the chance of negativity”.

In absence of the agreed definition, the researcher deemed the definition by the Institute of Risk Management (IRM) to be appropriate for this study as it considers both the combination of probability of an event and its consequences, with risk management being concerned with both positive and negative outcomes.

2.2.3 Risk and Uncertainty

Risk and uncertainty are related concepts with debates about their meaning. The following paragraphs intend to clarify the meaning of risk as it relates to uncertainty.

Risk is a narrow concept under the broader category of uncertainty (Acharyya, M. 2006). A risk condition is the degree of risk that is present in the condition under which the decision is made (Roberts, A. et al. 2003:2/28-37; Ricciardi, V. 2007). There are conditions bearing risks but the extent of these risks cannot be accurately estimated. Risk may be considered as

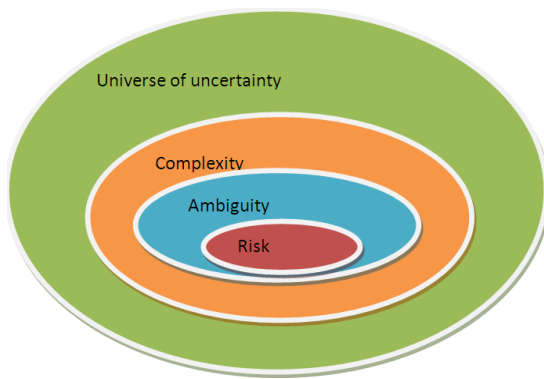
a state of an event whose outcome is measurable in numerical terms and whereas uncertainty is a state of mind, whose outcome is not measurable (Williams, S., et al. 2003). However, complications arise when risk bears the meaning of either hazard or loss and opportunity or gain (Slovic, P., Weber, U.E. 2002; Williams, S., et al. 2003; Acharyya, M. 2006). Various researchers have termed risk as: change, ambiguity, certainty, complexity, possibility, probability and subjectivity (Rennie, R. A. 1961; Wood, G.O. Jr. 1964; Crockford, G.N. 1976; Renn, O. 2004; Roszkowski, J.M., Davey, G. 2010).

It can be stated, therefore, that risk in its broader sense is closer to uncertainty (Olsson, R. 2007). The core issue is that uncertainty cannot be set on the probability framework. Acharyya, M. (2006:pp16) has further described the states of uncertainty as:

“The complexity is a subset of uncertainty, which represents the partially unknown in the vast area of the unknown, although subjectively, probabilities cannot be applied. The second state is ambiguity, which means even when it is possible to reach a definite conclusion about something, where complexity is resolved; it may still be difficult to find out what that actually means. Ambiguity represents uncertain situations where subjective and empirical probabilities can be applied. Finally, risk represents an uncertain situation of unknown from large area of known, where subjective, empirical (statistical) and logical probabilities can be applied. All these three states of uncertainty (complexity, ambiguity, and risk) including the remaining areas represent the universe of uncertainty, where lack of information prevents any probabilistic assessment”

The three states of uncertainty are presented in Figure 2.2 below.

Figure 2. 2: Three states of uncertainty



Source: Acharyya, M. (2006). Presentation modified by the researcher

2.2.4 Perceptions of Risk in Different Functions

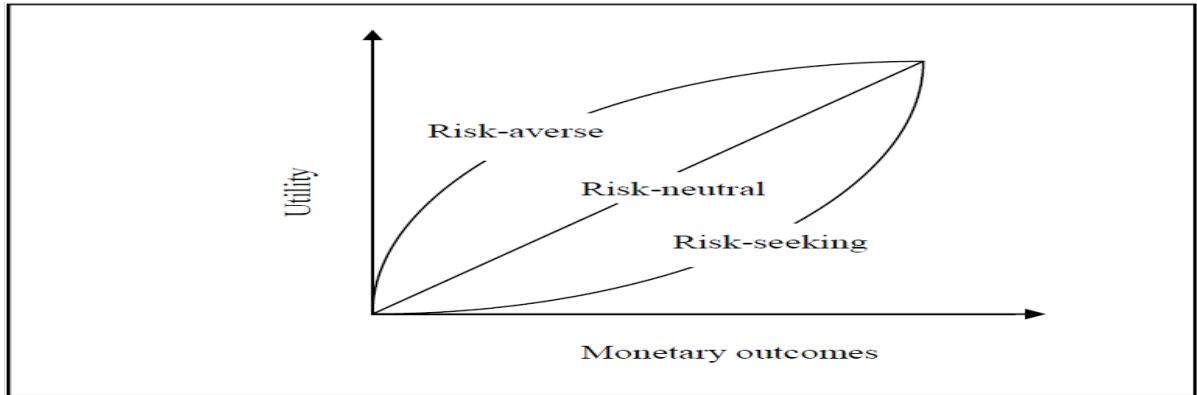
Risk can be perceived differently by people from different functions in the organizations (Riabacke, I. 2006). It is observed by Helliard, et al. (2001:pp7) that:

“any risk management system will have input from, or be implemented by individuals and therefore the attitudes of these individuals to risk may have an important bearing on the successful implementation of the system. It is individuals within organizations who take risks and an enquiry into the attitudes of these individuals to the risks that they face and the decisions that they make may help companies to manage risk in the future”.

For example, from the economics perspective, the conventional way to discuss risk attitude has been to classify decision makers (Roberts. A., et al. 2003:pp37-38; Scott, A. 2003: pp7/39; Ricciardi, V. 2007) as risk-averse, risk-seeking, or risk-neutral, according to the shape of their individual utility functions (Nguyen, C.N. 2007). Risk-averse people may be seen as those who wish to avoid risk. The risk-averse person is the one willing to accept a lower average return to reduce the uncertainty. Risk- seeking people may be defined as those who view risk as an opportunity to make a profit.

Tversky, A., Fox, C. R. (1995) stated that risk-seeking is exhibited if a risky prospect is preferred to a sure outcome with equal or greater expected value. Between the two extremes are risk-neutral people. A risk neutral investor is completely indifferent to the risk involved in an investment and is only concerned about expected return. In the real world, however, it is extremely difficult to present ‘zero risk’ as a viable option (Nakayachi, K .2000). Figure 2.3 shows three differently shaped utility curves corresponding to risk-averse, risk-neutral, and risk-seeking behaviors.

Figure 2. 3: Utility functions



Source: Vlahos, K. (2001, p51)

Section Summary

Risk and risk management have become very important as a result of the increasing pace of innovation, corporate governance and compliance, change in technology, customer demands, market globalization, complex financial instruments, the speed of communications and the risks arising from within as the business strives to grow. However, there is no universally accepted definition of risk in available literature, and differences occur in context and purpose of use. The complications arise when risk bears the meaning of either hazard or loss and opportunity or gain, and this may contribute to misunderstanding. From the interdisciplinary perspective, people may perceive risk differently, which may have implication in the understanding EWRM implementation in the organization. It is from this perspective, that this study identified research question (RQ1) to test the perception and understanding of EWRM in the case companies. The findings would confirm or not confirm how people perceptions of risk impacted EWRM implementation in the case companies. The following section 2.3 reviews the various aspects of EWRM framework.

2.3 Enterprise-Wide Risk Management (EWRM)

This Section reviews the EWRM framework. There are other frameworks, but EWRM is considered suitable for this study as elaborated in Sub-Section 2.3.3. Integrating EWRM with management activities is reviewed in Sub-Section 2.3.4. A review of key research and case studies relevant to EWRM is made in Sub-Section 2.3.5, and finally in Sub-Section 2.3.6, telecoms risks are reviewed. To wrap up the Section, a summary of the key points raised are highlighted including an overall critical view of EWRM implementation.

2.3.1. Evolution Process Towards EWRM

Previous discussions indicated that risk and risk management could mean different things to different people depending on their discipline (Zeck, J. 2001; Acharyya, M. 2006; Riabacke, I. 2006). Traditionally, the key objective of risk management was to control risk and minimize the loss arising from the risks (Olson, D.G., Simkiss, J.A. 1982). Literature suggests that the development of risk management originally grew out of insurance business (Dickinson, G. 1975a; Bannister, J. 1999) to manage pure risk, which represented natural hazards or catastrophes. However, the management of financial risk was limited to the function of general management under the heading of business risk. During the 1970s the financial view of risk management received greater attention with the concept of financial engineering (Henderson, H. 1978; Bannister, J. 1999; Aven, T. 2004), which basically introduced a huge momentum in the practice of risk management as a unique discipline (D'Arcy, S.P. 2001; Liebenberg, A., Hoyt, R. 2003; Nielson, N.L., et al. 2005). However, both approaches were fragmented (Acharyya, M. 2006) and did not consider the multidimensional perspective of risk.

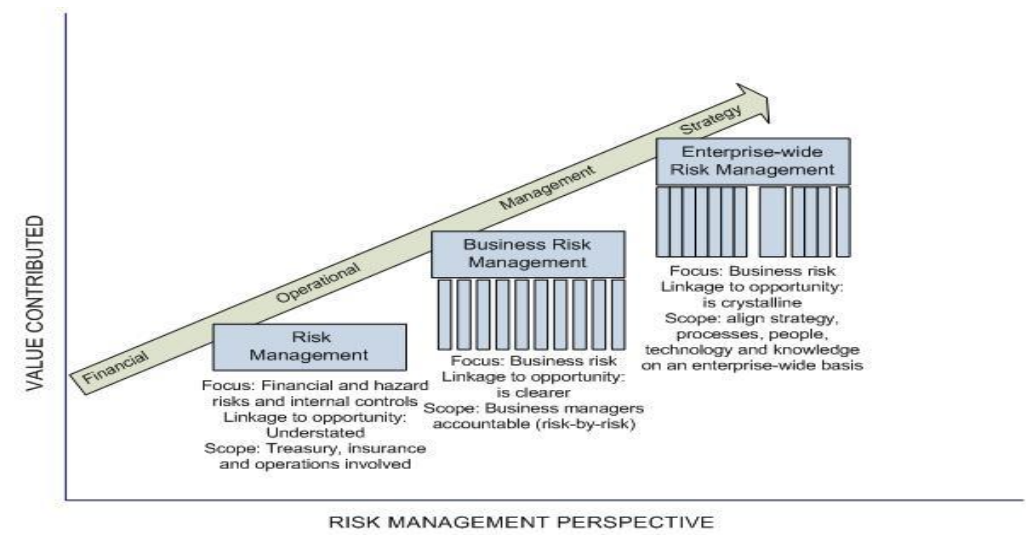
Business Risk Management Approach

As result of the deficiencies of traditional management of risks, a business risk management approach evolved (Hunter, W.C., Smith, S.D. 2002); this entailed implementing a systematic risk evaluation process, by applying risk management techniques to critical risks. Improvements could be seen (DeLoach, J.W. 2000; Ryu, C.Y. 2008) at management level, where they moved to a more advanced risk management approach by integrating risk identification, assessment and management as part of everyone's task. Furthermore, Chief Risk Officer (CRO) appointments took place across large companies (Aabo, T., et al. 2005). CROs were responsible for integrating risk management within the company and managed "all aspects of risk". Despite the foregoing, this business risk management approach, exhibited areas needing improvement, as evidenced by corporate failures- examples: Barings bank 1995, Piper Alpha oil platform disaster 1988 and Enron collapse 2001 (DeLoach, J.W. 2000; Vagneur, K. 2004). At this stage regulatory bodies and firms' executives realized that the depth and breadth of risks like terrorist attacks or other man-made disasters were not sufficiently mitigated so as to preserve shareholder value. This is where Nielson, N.L., et al. (2005) argued for a third generation of risk management- the EWRM approach.

EWRM Approach

Although business risk management remedied the major deficiencies of traditional risk management- which considered only pure risk which represented natural hazards/ catastrophes, took a narrow and fragmented view of risk management with much focus on isolated risk at the expense of focusing on business portfolio of risks at the enterprise –wide level (DeLoach, J.W. 2000.pp24-25). EWRM introduced a risk management process where all risk categories; including strategic risks were proactively managed (DeLoach, J.W. 2000.pp23-42; Rao, A., Marie, A. 2007; Collier. P. M. 2009: pp48-49). It suggested that management would be able to consider all significant exposures including political trends, technology shifts, competitor moves (DeLoach, J.W. 2000; Beasley, M. S., et al. 2005; Bowling, D.M., Rieger, L.A. 2005; Manab, A.N., et al. 2010). EWRM would increase the firm’s capability to respond with a superior ability to the internal and external risks and this intervention would be able to stabilize earnings of the firm (Andersen, T.J.2008), which could increase the shareholder value. EWRM as a final stage of evolution considered all risks from a more integrated holistic perspective, including strategic risks (Miller, K.D. 1992; DeLoach, J.W. 2000:pp23-42; Aabo, T., et al. 2005; Brown, I., et al. 2009). Figure 2.4, illustrates an overview of the evolution of EWRM.

Figure 2. 4: The Evolution of EWRM

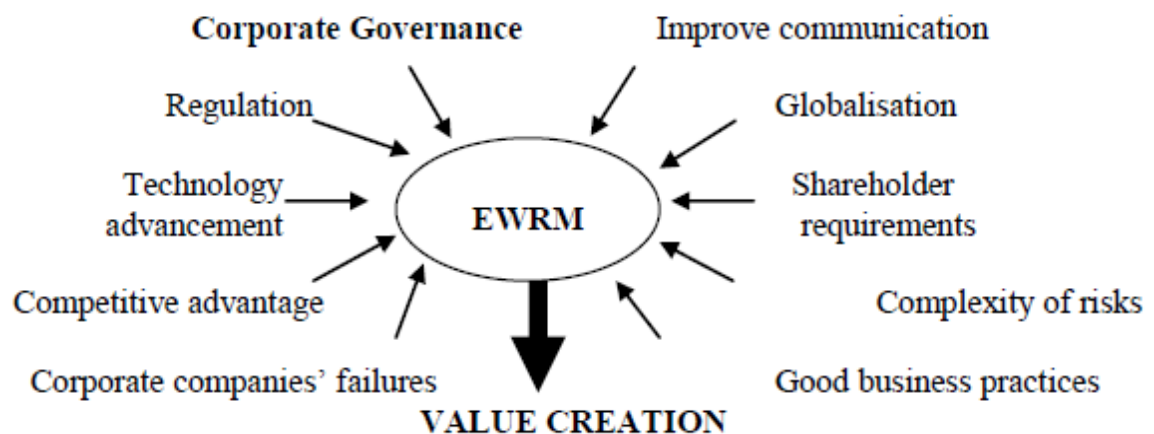


Source: DeLoach, 2000:p24

2.3.2. The Contributing Forces towards EWRM

Corporate failures can be caused by various forces including inefficient risk management practices (Manab, A.N., et al.2010). Such forces contributed for the shift from traditional risk management to EWRM as illustrated in the Figure 2.5 below. Besides the introduction of legal guidelines and compliance requirements, there were several other external factors contributing to the rise of EWRM, such as the emergence of new business models and business practices (Tillinghast – Towers Perrin. 2000; Vagueur, K. 2004: pp2/2-6).

Figure 2. 5: EWRM Drivers



Source: Manab, A.N., et al. (2010)

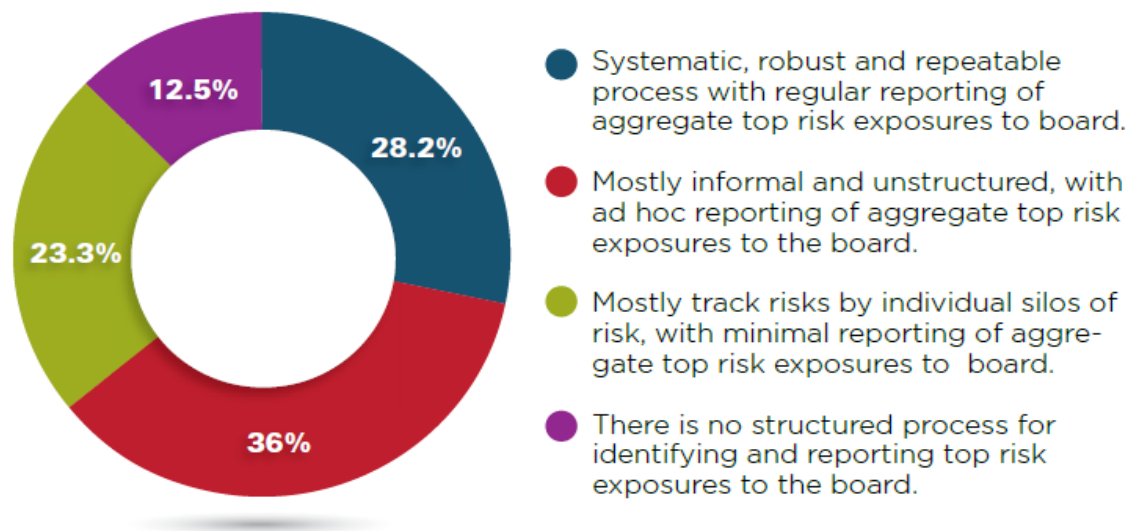
The implementation of EWRM

Despite the external forces, the practice of EWRM across different industry sectors remained relatively new and unproven practice (Rao, A., Marie, A. 2007), with little agreement about the end destination and stages of transition. However, some industries were quicker in adopting the risk management system; others still had a lot of room for improvement. An insight of the progress stage of EWRM implementation was captured in the following studies and surveys: In a survey conducted by Deloitte (2008:pp2-7) revealed that there were growing interest in EWRM, 56% of respondents had had EWRM programs in place for less than two years, and regulation and regulatory compliance appeared to be key drivers of EWRM. In an IBM's Global CFO survey (2007) with more than 1,300 CFO's and senior finance officers in companies worldwide, only 52% acknowledged having some sort of formalized risk management program. In a survey report over the state of implementation of EWRM, Beasley, M. S., et al. (2010: pp13-14) found that:

“28.2% of all respondents describe their current stage of EWRM implementation as systematic, robust and repeatable with regular reporting to the board, while almost 60% of respondents say their risk tracking is mostly informal and ad hoc or only tracked within individual silos or categories as opposed to enterprise-wide. Another 12.5% indicated that their organization had no structured process for identifying and reporting top risk exposures to the board”.

The results of the survey are presented in the Figure 2.6 below.

Figure 2. 6: Current Stage of EWRM Implementation



Source: Beasley, M. S., et al. (2010): COSO's 2010 Report On ERM, p3.

The understanding of the EWRM

The results of the surveys showed that the understanding of the EWRM by business managers seemed to be clouded in common misconceptions (Acharyya, M., Johnson, J. 2006; Fraser, R. S. J., Simkins, J. B. 2007) about both the approach and the process. Relatively few organizations (Hexter, E; et al, 2008) understood the importance of developing an EWRM approach (Slywotzky, A. 2004; Calandro Jr. J., Lane, S. 2006; PWC, 2009; Zand, D.E. 2009; Economist, 2009). There was much confusion about what was meant by EWRM (Deloitte, 2008); and organizations were struggling in defining their programs in respect of how to start and demonstrate the value of improved risk management. Due to its complexity and comprehensive nature, EWRM approach was deemed a costly initiative as observed in a survey carried out by Corporate Executive Board (2004); where EWRM-related costs included, but were not limited to: conducting risk identification and

quantification exercises, startup costs, hiring external consultants, costs of attracting, training, retaining efficient and implementing expensive IT systems. In their report on the “Current State of Enterprise Risk Oversight Survey”; Beasley, M. S., et al. (2010: pp13-14), they identified the following impediments: “*Competing priorities, insufficient resources, lack of perceived value, perception that EWRM adds bureaucracy and lack of board or senior executive EWRM leadership*”. Leadership of the board of directors (BOD) and the executive (Gordon, A.L., et al. 2009) played an important role in the adoption and the successful implementation of EWRM (Beasley, M. S., et al. 2010). Under the EWRM approach, the activities of BOD became broader (Fraser, R. S. J., Simkins, J. B. 2007; Brown, I., et al. 2009) which included: setting business strategy and objectives, determining risk appetite, establishing culture and value, developing internal policies and monitoring performance. This view was supported by the study survey findings from Deloitte (2004) which revealed that the board of directors’ involvement was critical and influenced the EWRM adoption (Fraser, R. S. J., Simkins, J. B. 2007; Standard & Poor’s. 2008).

2.3.3 EWRM Framework

In this Sub-Section, EWRM definition and the main concepts of the framework are reviewed. The researcher chose COSO (2004) -EWRM framework as a primary model for this study because it is internationally considered (Havenga, A., Venter, P., 2007) as a prime source of reference by following institutions:

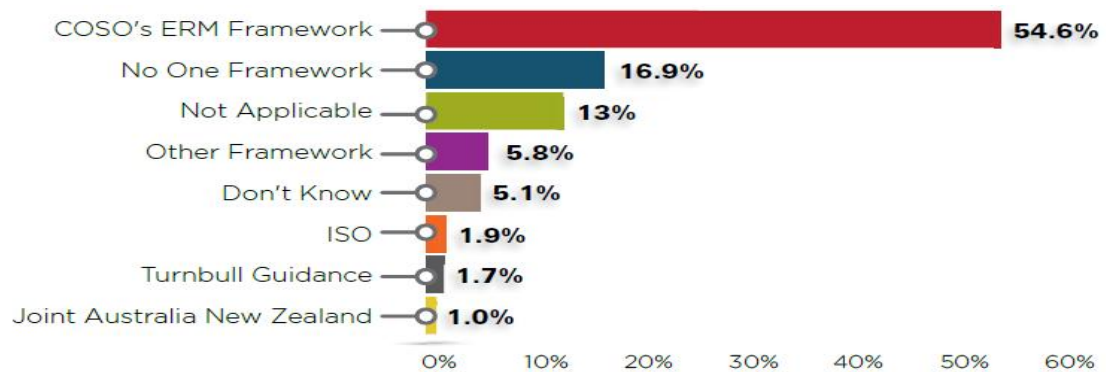
- The American Accounting Association
- The American Institute of Certified Public Accountants
- Financial Executives International
- The Institute of Management Accountants
- The South African Institute of Chartered Accountants
- The Institute of Internal Auditors
- The Institute of Risk Management South Africa
- PricewaterhouseCoopers, KPMG, Deloitte and Ernst & Young.
- Academic Institutions: The EWRM Initiative at North Carolina State University.

In determining respondents’ awareness of various published Frameworks, Beasley, M. S., et al. (2010:pp5) survey, found that:

“COSO’s EWRM Framework was overwhelmingly the most well-known of the frameworks with 36.7% of respondents reporting they were very familiar with the framework and only 7.9% of respondents indicating they were not at all familiar with the framework. The other frameworks listed: Joint Australia/New Zealand 4360-2004 Standards, ISO 31000-2009, and the Turnbull Guidance, were not very well known at all, with respondents having no familiarity at 72.6%, 46.4% and 51.3% respectively”.

In their COSO’s 2010 Report on EWRM, Beasley, M. S., et al. (2010:pp6), found when organizations looked for guidance in EWRM implementation, they typically chose COSO’s EWRM framework (54.6%) compared to other frameworks. This is presented in Figure 2.7.

Figure 2. 7: Framework Used for EWRM Guidance



Source: Beasley, et al. (2010): COSO's 2010 Report On ERM, p6.

Definition

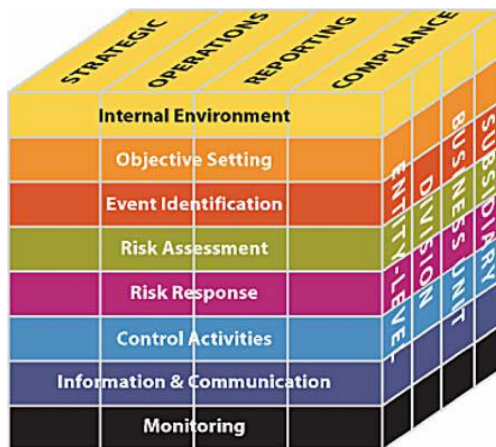
“Enterprise-wide risk management is a process, effected by the entity’s board of directors, management, and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risk to be within the risk appetite, to provide reasonable assurance regarding the achievement of entity objectives.” (The Committee of Sponsoring Organizations of the Treadway Commission-COSO, 2004:pp2)

From the definition, EWRM is an ongoing process with a top-down approach. This implies that EWRM has to be driven from the firms’ executives, who will also set the direction and the tone, it is to be effected by people at every organizational level and this includes taking an “enterprise-wide” portfolio view of risks. “Enterprise-wide” in this context may mean the removal of traditional functional, divisional, departmental or cultural barriers (KPMG, 2001).

The definition also states that EWRM has to be applied in a strategy setting. It is designed to detect potential events, which can affect the whole organization. Finally, the major goal of EWRM is to help to achieve the core objectives of an enterprise by improving decision-making at all levels of the organization. Hence, EWRM is an integrated risk management process (Ryu, C.Y. 2008) to identify, assess and implement a firm-wide strategy to manage the risks (Harner, M. M. 2010).

The COSO (2004) integrated framework can best be described on the basis of a cube in a three-dimensional matrix as illustrated in Figure 2.8. The vertical columns include the four objective categories: strategic, operations, reporting, and compliance. The horizontal front rows depict the eight components of EWRM, which is the actual risk management process and the third dimension shows how EWRM considers activities at all organizational levels of the firm (Ballou, B., Heitger, D. 2005). This illustration of the framework aims to represent EWRM's holistic approach by having a portfolio view of all risks that may affect the entire firm (COSO (2004: p 5.)).

Figure 2. 8 COSO Framework



Source: COSO (2004: p 5.)

The Objectives

The first dimension of the cube represents a firm's established mission or vision. These four objectives are meant to be achieved with the support of EWRM, which are differentiated in the four categories of:

- Strategic objectives, such as high-level goals, aligned with a firm's specific mission statement;
- Operations objectives refer to the firm's effective and efficient use of resources,

- Reporting objectives are a firm's need for reliable financial reporting, and
- Compliance objectives for the reason that a firm's need to comply with laws and regulations.

The specific objectives are set by management to reflect how the entity attempts to create value. An overview of potential risks of each category is provided in Figure 2.9 below.

Figure 2. 9 Potential Risks of Each Objective Category

Strategic	Operations	Financial	Compliance
Market Dynamics <ul style="list-style-type: none"> • Macro-Economic Factors • Socio-Political • Competitor Behaviour • Customer/Lifestyle Trends • Industry Specific Conditions • Technology Innovation Planning & Resource Allocation <ul style="list-style-type: none"> • Strategic Planning • Organisational Structure • Capacity • Budgeting & Forecasting • JV's /Alliances & Partnerships • Special Purpose Entities • Technology Foundation Major initiatives <ul style="list-style-type: none"> • Vision & Direction • Planning & Execution • Measurement & Monitoring • Technology Implementation 	Customer Relationship Management <ul style="list-style-type: none"> • Marketing Strategy • Advertising Effectiveness • Customer Satisfaction • Channel Partner Relationships • Aftermarket Sales • Maintain Brand Supply Chain Management <ul style="list-style-type: none"> • Master Planning & Forecast • Supplier Selection & Procurement • Production • Quality • Time to Market (Const.) • Transport & Logistics • Distribution Channels Physical Assets <ul style="list-style-type: none"> • Real Estate • Property Plant & Equip't • Inventory 	Market <ul style="list-style-type: none"> • Interest Rate • Foreign Currency • Commodity • Derivatives Liquidity and Credit <ul style="list-style-type: none"> • Cash Management / Flow • Funding & Capital Availability • Hedging • Credit & Collections • Credit Collateral • Insurance • Investment Evaluation 	Code of Conduct <ul style="list-style-type: none"> • Ethics • Bribery & Corruption • Management Fraud • Employee Fraud • Unauthorized Use • Illegal Acts • Reputation Legal <ul style="list-style-type: none"> • Liability • Intellectual Property • Global counterfeiting • Anti-Corruption • Warranty • Competition Law • Environmental • Industry Specific

Source: Deloitte, 2007; as in Ryu, C.Y. (2008)

Since risks related to compliance objectives can be seen as being within the firm's control, EWRM is expected to provide high assurance of achieving them. In contrast there are risks which arise from strategic and operations objectives. These are however, not always within the firm's control but rather subject to external events. For these risks, EWRM can provide reasonable assurance that management is informed in good time. (COSO, 2004).

Organizational Levels

This dimension of the COSO-2004 framework aims at emphasizing that EWRM considers risks and activities at all levels of the organization, no matter whether it is at enterprise-level, division, subsidiary, or business unit process level. Integrating the “enterprise-wide” risks at all levels is a key element of EWRM, as it enables management to attain a portfolio view of risks. Moreover, this holistic approach aims to actively involve all people of the firm in contrast to isolating risk management in independent silos (Ryu, C.Y. 2008).

EWRM Components

The third dimension shows the eight interrelated components of EWRM. These components depend on various factors, such as the size of the firm, the industry it operates in, the maturity of the risk management process in place, and management style. The eight components can be viewed as single steps of the actual risk management process of EWRM. The process is not strictly a serial one, but multidirectional and an ongoing process (KPMG, 2001; Burnaby, P., Hass, S. 2009). The following are the highlights of the different components:

- **Internal Environment**

This risk management process involves management setting the right tone. The importance of EWRM needs to be demonstrably supported throughout the organizational process. Employees at all levels should understand EWRM and the firm’s risk culture and act accordingly. Communication of the risk strategy and structure are essential and the firm should establish different EWRM training, and use an appropriate common language (DeLoach, J.W. 2000: pp43-58; Ryu, C.Y.2008) to ensure everyone understands the board’s objectives. Management need to determine the appropriate risk appetite (Power, M. 2009): the amount of risk a firm is willing to accept (Vagueur, K. 2004:pp20-22) as it strives to achieve its goals and create value (Institute of Internal Auditors, 2009). This reflects the firm’s risk philosophy that influences its risk culture, and ethical values (Deloitte, 2004, 2005).

- **Objective Setting**

In the objective setting process, management considers risk strategy within the setting of objectives. By establishing risk strategy, a firm has to closely align its strategic objectives

and goals with its risk appetite (Power, M. 2009) along with the goals of the risk management. Formulating an own risk strategy is a very important activity for the firm, as it affects all of its future investment decisions. A proper strategy should communicate the types of risks the firm can bear to its own advantage.

- **Event identification**

Management identifies events which can impact the firm: events that may have a negative impact -risks, and/ or a positive impact representing opportunities, which management can channel back to strategy setting (COSO, 2004). Documenting the events and conditions (Tillinghast – Towers Perrin. 2000) is very important. Events may occur externally or internally that may represent material threats (Csiszar, N.E.2008) or opportunities to exploit for competitive advantage. In order to get a portfolio view of risks at entity-level, management must have a detailed listing of all potential risks faced by a firm. The identification of potential events should be an ongoing process, as risks are constantly evolving. In practice, a variety of methods for risk identification (Tillinghast – Towers Perrin. 2000) can be used such as surveys, internal workshops, internal auditing, brainstorming sessions, and interviews to identify risks of each category.

Depending on the characteristics of each individual firm (Gordon, A.L., et al. 2009); the vast majority of literature findings suggest a hybrid form of the top-down and bottom-up approach to risk identification (DeLoach, J.W. 2000; KPMG, 2001; Deloitte, 2004; Ryu, C.Y 2008). The risk identification process should start with the top-down approach (Donnell. O.E., 2005). It focuses on risks that affect the achievement of objectives at firm-level, such as reputational risks. Responsibility for these risks resides (Fraser, R. S. J., Simkins, J. B.2007) with senior management executives and the board of directors. Risk identification at this level can be done by conducting workshops with the board of directors and senior management as participants with the aim of identifying the general risk profile of the organization. Additionally, interviews with senior managers or brainstorming sessions can be undertaken to support the identification process. This step is followed by the bottom-up approach, which is determined by the identification of those risks owned by the employees in the operative business units (Ryu, C.Y 2008). The bottom-up approach gives the responsibility of risks to those at division or process-level. Thus, hybrid form of the top-down and bottom-up approach can identify risks at firm- and process-levels.

- **Risk Analysis**

In the risk analysis (assessment) step of the risk management process, the previously identified risks are analyzed (Caldwell, F. 2008) to better determine how they should be managed. This step, therefore, allows management (Tillinghast – Towers Perrin. 2000) to understand the extent to which potential events might impact the objectives of the firm, as set in the second step of the risk management process (AIRMIC, 2010). Risks are assessed with regard to their impact and likelihood on both an inherent and residual basis. Analysis techniques range from simple to sophisticated measurements such as sensitivity analysis, scenario analysis and stress testing.

- **Risk Response**

This step identifies and evaluates possible responses to risks. Having derived an aggregate of all risks from different categories (Caldwell, F. 2008), management should select and execute responses based on evaluation of the portfolio of risks. The concept of a risk portfolio assumes that various risks have the same characteristics. Risks are viewed in groups depending on how they relate to each other. Understanding such correlations (Tillinghast – Towers Perrin. 2000) will accurately reveal the realities of business. This portfolio view of risks will help management to make risk response decisions based on a complete view of the enterprise.

- **Control Activities**

Control activities occur throughout the organization at all levels and in all functions. Policies and procedures are established and implemented to help ensure the risk responses are effectively carried out (COSO-2004).

- **Information and Communication**

Relevant information is identified, captured, and communicated in a form and timeframe that enable people to carry out their responsibilities. Effective communication also occurs in a broader sense, flowing down, across, and up the entity (COSO-2004).

- **Monitoring**

The entirety of enterprise risk management is monitored and modifications made as necessary. Monitoring is accomplished through ongoing management activities, separate evaluations, or both (COSO-2004).

Summary

In general, it may be appreciated that the above-mentioned components will not function in identical way in every entity. Application in small and medium-sized entities may be less formal and less structured. Nonetheless, small entities still can have effective EWRM as long as each of the components is present and functioning properly (COSO-2004). However, there are factors that may impact EWRM such as the degree of regulatory environment, political uncertainty, lack of reliable infrastructure; the industry sector specific challenges such as levels of competition, customer's information privacy, and resilience issues of security in the new service areas such as cloud and mobile applications are of critical importance.

2.3.4 Integrating EWRM with Management Activities

The business environment is constantly changing; implementing COSO (2004) EWRM is a never ending process. Sustaining EWRM implementation requires constant attention by senior management executives (Shenkir, G.W., Walker, L.P. 2007; Beasley, M.S., Frigo, M. 2010). There are strategic processes for integrating EWRM into management activities. These processes /factors play a role of sustaining EWRM implementation and increase the adoption strategies to overcome the implementation barriers.

Strategic Planning

EWRM by definition (COSO-2004) is part of strategy setting; so EWRM and strategic planning should be viewed as complementing each other and not as independent activities. If strategy is formulated (Beasley, M.S., Frigo, M. 2010; Arena, M., et al. 2010) without identifying the risks being embedded, then the strategy is incomplete and is at risk of failing (Shenkir, G.W., Walker, L.P. 2007). Mismanagement of strategic risks arising from poor planning, has been shown to be the cause for loss of shareholder value (Kocourek, P., et al. 2004).

Balanced Score card (BSC)

Integration of the BSC with EWRM can enhance performance management (Beasley, M.S., et al. 2006). EWRM adds value to the BSC through the identification of risks that could stand in the way of achieving the targets in each of the four perspectives of BSC: Customer, Internal processes, Innovation/learning, and Financial. By monitoring the key performance indicators (KPI's), management can assess how effectively their risk mitigation efforts are

working (Woods, M. 2008). In effect, the KPI's for each perspective also serve as key risk indicators (KRI's) although they are not initially selected for that purpose. For example, if a target for customer satisfaction is not achieved, it suggests that some risks related to the item exist. The same metric can be used for monitoring both strategy and risk. The conventional BSC (Beasley, M.S., et al. 2006; Kaplan, R. S., Norton, D. P. 2007) can be integrated with EWRM to manage and monitor risk related to the strategic objectives (Sheehan, T.N. 2010). Using a risk scorecard for the key risks identified in each of BSC perspectives; this would then act as a way to assign responsibility for managing the risk (Beasley, M.S., et al. 2006).

Budgeting

A company's budget or financial plan reflects this year's initiative to implement the organization's long-term strategy (Scott, A. 2003: pp8/8-9). The annual budget can be integrated with EWRM to provide insights on what the strategic business unit's leadership sees as the threats to meeting its financial plan. A risk map (Shenkir, G.W., Walker, L.P. 2007) presented with the unit's budget provides information to senior management on what the major threats are to meeting the financial plan for the year (Kendrick, T. 2006:pp155-182). The risk map gives senior management (Roberts, A. et al. 2003:pp3/31-36) a starting point in the budget review process without having to waste time uncovering the implicit budget risks. EWRM coupled with the budget review process can enrich a discussion and lead to a better understanding of the threats standing in the way of making the budget and subsequently achieving it.

Business Continuity Management

As noted in the previous discussion of risk identification, regardless of how robust the effort is, some unknown risks will remain unknown at the end of the process (Vagneur, K. 2004:pp23-25; Sharp, J. 2006:pp98-124). A company prepares for these unknown risks through its business continuity management, which is an essential element of the EWRM process. According to Roberts, A., et al. (2003:pp7/53):

“Business Continuity Plans operate as part of the organizational risk management system. They act as a kind of safety net in the event of a major impact that has either not been included in the risk management system or is of sufficient magnitude to be uncontained by the risk management system”.

Scenario Analysis

The scenario analysis encourages managers to predict conceivable future states of the business environment and consider how to take advantage of the opportunities and avoid potential threats –risks that are foreseen (Scott, A.2003: pp4/27; Roberts, A. et al. 2003:pp4/50-90; Acharyya, M. 2006). Scenario analysis can be used in many stages in the process of managing risks for example, risk identification, problem framing and strategy formulation (Roberts, A. et al. 2003:pp4/50-90). The development of the scenario analysis is closely associated with the risk of strategic planning and more generally, the emergence of the field strategic management.

Corporate Governance

EWRM ties in closely with corporate governance by improving information flows between the company and the board regarding risks (Tonello, M. 2007); and this enhances discussions of strategy and the related risks between executives and the board. According to Manab, A.N., et al. (2010:pp242):

“A series of company failures, corporate scandals, and frauds are among the reasons for companies to effectively implement risk management programs. These companies’ failures are caused by poor risk management and corporate governance”.

Thus, management identifies acceptable levels of risks to be taken and assumed and continuously focuses on them. This process improves disclosures to stakeholders about risks taken and yet to be managed. This reassures the board that management no longer manages risks in silos and proactively can identify which of the organization’s objectives are at greatest risk. Flow of risk information to the board is critically important in improving corporate governance (Smith, D., Politowski, R. 2006:pp43-65; Tonello, M. 2007; Brown, I., et al. 2009).

2.3.5 Research and Case Studies on EWRM

Research

There are very few academic research studies to date which attempted to conceptualize some specific aspects of EWRM, as highlighted in tables 2.1 and 2.2. However, there is a large

non- academic body of literature which is scattered and more importantly focused on financial institutions such as banks and insurance firms.

Researchers indicate that EWRM is a relatively new area in the academic research arena (Beasley, M. S., et al.2005). Early empirical works on EWRM was done by Colquitt, L., et al. (1999) as highlighted in Table 2.1, where operational risks were the main risks handled, while the works of Kleffner, A.E., et al. (2003b) found that 31% of the insurance companies in Canada adopted and implemented EWRM for the reason of satisfying stock exchange control guidelines, upon the encouragement of the board.

Studies by Liebenberg A., Hoyt, R. (2003) were on determinants of EWRM, and found that firms which appointed chief risk officer (CRO) were more likely to be financially leveraged, however, mentioned that further research was necessary. In a related research conducted by Pagach, D.P; Warr, R.S. (2007), it was found that the appointment of CRO was positively associated with size, leverage, volatility and number of segments the firm has (Subramanian, R.I., et al. 2010). In a survey by Beasley, M. S., et al. (2005) into the determinants of EWRM: surveyed internal auditors and found that EWRM implementation was positively associated with board independence and requests from the CEO/CFO to have internal audit involved. Further works on EWRM examined additional determinants of EWRM adoption, by Desender, K. A. (2007) which was based on 100 pharmaceutical companies, and found that there was an association between a ‘separate chairman and CEO’ and the degree of EWRM implementation by the company.

Further studies on EWRM by Beasley, M. S., et al. (2008) and Gates, S., et.al. (2009) extended the EWRM literature by moving beyond the EWRM adoption question and examined aspects of whether EWRM adds value (Subramanian, R.I., et al. 2010). Beasley study on the results of the announcement of the appointment of chief risk officer (CRO) by the firms concluded that shareholders of the firms with little slack welcomed the EWRM. The shareholders of large non-financial firms whose earnings were volatile, with larger amount of intangible assets, lower leverage and lower amount of slack, acted positively towards EWRM. This led Beasley to conclude that a well implemented EWRM program can create value when it restricts the likelihood of significant downside risks such as financial distress. Gates, S., et.al. (2009) extended the study on the earlier work by examining the value seen inside the company as measured by better decision making and increased

profitability by reviewing components of COSO-2004. Their study found a good EWRM environment and communications system of top- down and bottom- up on EWRM missions, coupled with explicit risk tolerance levels: positively influenced better decision making, and this could impact on profitability. However, better decisions may not necessarily result in increased profitability. This highlighted the difficulty in bridging the value of EWRM, the internal control and financial reports (Subramanian, R.I., et al. 2010).

Table 2. 1: Summary of Academic research -Articles on EWRM

Source	Year	Author	Objective of study	Findings
Risk Management Insurance Review	1999	Colquitt, Hoyt, and Lee	Was to assess the characteristics and existent of integrated risk management. Surveyed 379 risk managers in year 1997	Three most common risks non- operational handled by risk management department were: political, interest and exchange rates. Risk mangers 'role evolved and covered wider spectrum of risks.
Risk Management Insurance Review	2003	Kleffner, Lee, and McGannon	A survey of the impact of the Toronto stock exchange (TSE) guidelines on risk management strategy and evolution of risk management discipline.	Survey results: TSE was a driving force (37%) behind EWRM decision, encouragement of directors (51%); having risk manager (61%) influenced decision to implement EWRM. Factors impending implementation of EWRM were: organizational culture and lack of qualified personnel.
Risk Management Insurance Review	2003	Liebenberg and Hoyt	To investigate the differences between firms that have appointed CRO and matched sample. US firms.	There is no systematic difference between firms that signal their use of EWRM and the appointment of CRO and matched sample. Larger firms and highly leveraged are more likely to appoint a CRO.
Internal Auditor	2005a	Beasley, Clune, and Hermanson	Survey of members of IIA on internal involvement in EWRM.	There was wide diversity in adoption of EWRM and internal auditing dept. role in EWRM. There was optimism regarding EWRM's impact on the company & internal auditing.
Journal of Accounting and public policy	2005b	Beasley, Clune, and Hermanson	To investigate factors associated with extent of EWRM implementation	The presence of: CRO, independent BOD, and explicit call from CEO /CFO for internal audit involvement in EWRM, are positively associated with extent of EWRM deployment.
Working paper	2007	Desender	To explore the link between EWRM implementation and the board composition	Results suggest: board independence has no significant relation with the EWRM quality; however, separation of chairman from CEO favour more elaborate EWRM and show the highest level of implementation of EWRM.
Journal of Accounting, auditing and finance	2008	Beasley, Pagach, and Warr	To get empirical evidence on the value of the corporate action in hiring the senior executives in charge of risk management	Shareholders of firms with little financial slack welcomed EWRM. Also shareholders from large non-financial firms with volatile earnings, intangible assets, lower leverage & lower amount of slack also react positively towards EWRM
Working paper	2008a	Pagach and Warr	To explore the link between EWRM implementation and the characteristics of firms that implement EWRM.	Larger firms and those with higher leverage tend to hire CRO. Firms that have less growth option are less likely to hire CRO. Conversely, firms that hire CRO tend to have fewer growth options. There is negative relationship between CRO hiring and change in the size of the firm.
Working paper	2008a	Pagach and Warr	To examine the impact of EWRM implementation on financial, assets and market characteristics.	There is no support for the position that EWRM is value creating.

Source	Year	Author	Objective of study	Findings
Working paper	2009	Gates, Nicolas, and Walker	To examine which components of EWRM framework lead to better decision and increased profitability	A good EWRM environment, better communication of EWRM missions and explicit risk tolerance levels, positively influenced better decision making. The said environment and explicit risk tolerance levels coupled with employees devotion to EWRM process appear to have an impact on profitability

Source: Adapted and modified from: Subramanian, R.I., Rogers, D., Simkins, B.J. (2010): "Academic Research on Enterprise Risk Management". In Fraser, J, & Simkins, B.J. (Ed.)

Case Studies

From the summary of the five case studies presented in table 2.2, Harrington, S. G., et al. (2002) examined the implementation of EWRM at the United Grain Growers (UGG). Certain benefits accrued to UGG by embracing EWRM such as risk costs did not increase, there was improvement in the communications of risks, and there was also enhanced coordination of risks between departments.

Aabo, T., et al. (2005), describe the successful implementation of EWRM at Hydro One Inc. the largest electricity company in Ontario Canada, over a period of five years. The case study presented the following benefits of EWRM at Hydro One:

"Achieve lower costs of the debt, Focus capital expenditures process on managing/allocating capital based on greatest mitigations of risk per dollar spent, Avoid land mines and other surprises, Reassure stakeholders that their business is well managed- with stakeholders defined to include investors, analysts, rating agencies, regulators and the press. Improve corporate governance via best practice guidelines; Implement a formulated system of risk management system. Identify which risks the company can pursue better than its peers."

Acharyya, M., Johnson, J. (2006) based their case study on the four major European insurers, to investigate the understanding, evolution, design, and performance of EWRM in these organizations, including the challenges they faced upon implementation of EWRM. Results led them to conclude that:

"There exists an inconsistent understanding of EWRM within insurance companies, CEO leadership and regulations appear to be the most important motivating factors for developing EWRM. Communication and cultural barriers are found to be the most important challenges in implementation of EWRM. Overall, the case studies revealed that there were numerous differences between the models of EWRM suggested by theory and those in place at leading insurance companies".

Nocco, B.W., Stulz, R.M. (2006) study discusses the theory and practice of EWRM in the nationwide insurance. It highlights the process and challenges involved in EWRM implementation, such as how a company should assess its risk appetite, measure their risks and major difficulties that arise in practice when implementing EWRM. The authors conclude that:

“More academic research is needed to help companies to have a better understanding of risks and how to quantify them reliably. They point out that: companies find that some of their most troubling risks-notably: reputation risk and strategic risks- are the most difficult to quantify. At this point there is little research that helps practitioners in assessing these risks, but much to gain from having a better understanding of these risks even if they cannot be quantified reliably”

Table 2. 2: Summary of Academic Research- Case Studies on EWRM

Source	Year	Author	What was examined?
Journal of Applied Corporate finance	2002	Harrington, Neihaus and Risiko	The implementation of EWRM at United Grain Growers; including benefit and insights gained.
Journal of Applied Corporate finance	2005	Aabo, Fraser, and Simkins	The implementation of EWRM at the Hydro One including the rise and evolution of the chief risk officer (CRO)
Strategic Finance	2005	Stroh	The implementation of EWRM and business risk management at the United health Group.
Journal of Applied Corporate finance	2006	Nocco and Stulz	A discussion of the theory and practice of EWRM with same extensions to the Nationwide Insurance.
Geneva Papers on risk and insurance: Issues and practice	2006	Acharyya and Johnson	The development of EWRM of four major European insurance companies

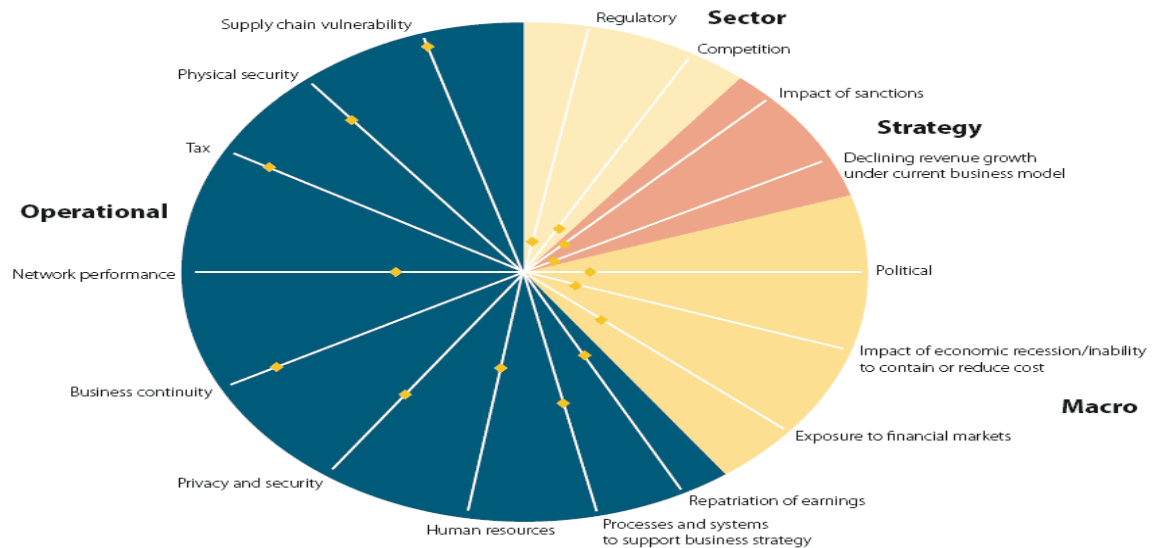
Source: Adapted and modified from: Subramanian, R.I., Rogers, D., Simkins, B.J. (2010): “Academic Research on Enterprise Risk Management”. In Fraser, J, & Simkins, B.J. (Ed.).

2.3.6. Risks in the African Telecommunications Industry.

Telecommunication operators in Africa face a number of strategic and operational risks such as: regulatory compliance, price wars, innovation, technology change, and political uncertainty (Ernst & Young, 2008, 2009, 2012; Garcia-Murillo, M; MacInnes, I. 2002; ITU, 2007). These risks can suitably be managed through a model that is integrative and holistic in nature such as EWRM (DeLoach, J.W. 2000). MTN Group- African Operations face similar risks in their respective market environment- across Africa as detailed in Figure **2.10** below. From the EWRM perspective, each of the risks is a piece of jigsaw puzzle that senior

management and the board need to fit together and evaluated in terms of relative importance to the enterprise's strategic goals and objectives so as to maximize business success and shareholder value by effectively balancing risk and reward.

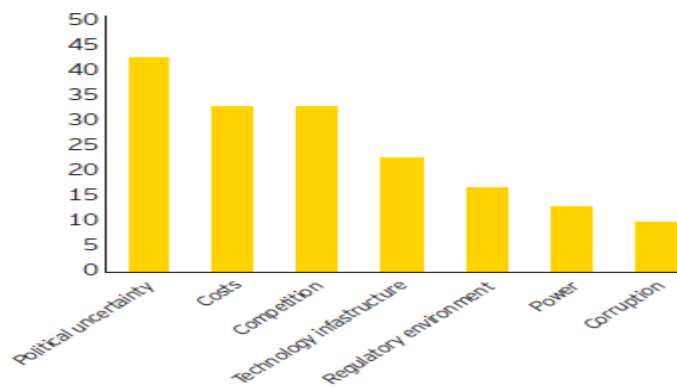
Figure 2. 10 MTN Group Principal Risks



Source: MTN Group 2009: Annual Report.

In the Ernst & Young (2009) research: “Africa connected- A telecommunications growth story”, political uncertainty topped the list of external risk factors faced by operators in Africa. This indicates that although the political environment has been relatively stable for the last few years, operators are still mindful of the potential for serious conflicts (example: Ivory Coast in 2010/2011). Operators, have also identified competition as another risk, as they view this level of competition as unsustainable and is affecting the revenue margins. Other risks (challenges) are lack of reliable infrastructure, regulatory environment challenges, corruption, high operating costs, and technological infrastructure as shown in the Figure 2.11

Figure 2. 11 External challenges facing telecommunications operators in Africa



Source: Ernst & Young Analysis: Africa connected - A telecommunication's growth story, 2009

Section Summary

During the 1970s risk management was approached in a fragmented manner and did not consider the multidimensional perspective of risk. Subsequently, evolution occurred and Chief Risk Officers were appointed across large companies to be responsible for integrating risk management within the companies to manage “all aspects of risk”. This ushered in ‘Enterprise-wide risk management’ (EWRM) as the final stage of evolution which considered all risks from a more integrated holistic perspective, including strategic risks. However, the implementation of EWRM was not easy and few of the industries implemented it. It was emphasized that Leadership of the board of directors and executive management played an important role in the adoption and the successful implementation of EWRM programme.

The definition of EWRM (COSO- 2004) framework implies that it has to be driven from the firms’ executives, who will also set the direction and the tone for EWRM implementation, and it should be effected by people at every organizational level and this includes taking an “enterprise-wide” portfolio view of risks. “Enterprise-wide” in this context may mean the removal of traditional functional, divisional, departmental or cultural barriers.

Academic research to date on EWRM includes studies that focus on various determinants of EWRM (including the hiring of chief risk officers and the firm characteristics) and, more recently, researchers have investigated the potential value associated with EWRM adoption. The case studies highlighted various beneficial aspect of embracing EWRM, and some challenges in the EWRM implementation.

From this perspective, there is relevance to this study with respect to challenges encountered in the implementation EWRM, as indicated in various case studies above, to an extent that only 28% (Beasley, S.M; et al.2010) of all respondents described their current stage of EWRM implementation as systematic, robust and repeatable with regular reporting to the board. Thus there are challenges to EWRM implementation. It is from this perspective that this study took to investigate EWRM implementation barriers. The next Section 2.4, reviews the various aspects of change, knowledge sharing in as far as they impact on the EWRM implementation.

2.4 Change, Knowledge Sharing and EWRM.

This Section briefly reviews change and knowledge sharing with respect to EWRM implementation. Overview of change management in a complex situation is presented, followed by a review of knowledge sharing in relation to EWRM, and general barriers to knowledge sharing. Finally, a summary is given at the end of the section.

2.4.1 Change Management in a Complex Situation.

Organizations including MTN face unstable and dynamic environments that necessitate a quick move to adapt to change (Fullan, M. 2001; Senge, P.M., et al. 2005). When an environment changes, an organization must be able to gather, process, and disseminate information very quickly (Paton, R.A., McCalman, J. 2008). Failure to do so can directly affect an organization's ability to maintain its competitive advantage. Communication is lateral and rapid in these complex environments (Fullan, M. 2001). To succeed in such complex situations, organizations that use an organic structure (Fullan, M. 2001; Burns, T., Stalker, G. M. 1994; Grieves, J. 2000) will integrate functional areas and departments together so that information can flow seamlessly between them (Sengupta, N., et al. 2006). This fast distribution of knowledge results in an increased ability to respond to changes in the internal and external factors highlighted in section 2.3.6 in relation to risks in the African Telecommunications industry and illustrated in the Figures 2.10 and 2.11 respectively.

2.4.1.1 Motivation and Barriers to Implementing Change and Knowledge Management

Organizational Culture and Change

Organizational culture is significant component that must be aligned with any change. Culture defines the global boundaries within which an organization functions (Kimbrough, L.

R., Compton, J. P. 2009). Strategies, processes, and behaviors are bounded by the organizational culture. Organizational culture determines values and beliefs which are an integral part of what one chooses to see and absorb (Davenport, T. H.; Prusak, L. 2000). It includes a shared perception of reality, regarding how things are and how things should be. Wellman, J.L. (2009): essentially describes culture as "the way it is around here."

It has been mentioned where risks are managed in silos (Acharyya, M.2006) there are very few people involved, which means risk management would not become embedded into the organizational culture (McDermott, R; O'Dell, C.2001; Blackhurst, J. 2006; McLaughlin, S. et.al. 2008). Employees at all levels should be involved and understand EWRM as well as the organization's risk culture. Management should determine the appropriate risk appetite (Power, M. 2009) and this would reflect the organization's risk philosophy that influences its risk culture, and ethical values (Deloitte, 2004, 2005). A survey of the impact of the Toronto stock exchange by Kleffner, A.E. et al. (2003b), found that among the factors impeding implementation of EWRM was organizational culture. Also, a number of researchers indicate (Miccolis, J. A., et al. 2003; Roberts, A. et al. 2003; pp2/39-47; Conference Board, 2005; Kimbrough, L. R., Compton, J. P. 2009) that organization's culture is a significant factor in EWRM deployment.

Organizational Culture and Knowledge Management

Organizational culture is the sum of shared philosophies, assumptions, values, expectations, attitudes, and norms that bind the organizations together (Lemken, B. et al.2000). Lack of organizational culture is a key barrier for successful implementation of knowledge management in an organization and it can also be the largest barrier in creation of a successful knowledge-based organization (Chase, R. 1997; Lucas, L.M. 2006). March (1988) discusses how our cultural norms often stifle innovation and new knowledge creation. Trust is one of the aspects of the knowledge friendly cultures that fosters the relationship between individuals and groups, thereby, facilitating a more proactive and open knowledge sharing (Alawi, A. et al. 2007). Another barrier to knowledge sharing is the lack of motivation and rewards. Organizational goals can't be achieved unless integrated the concept of motivation and rewards to its employees. Motivation can be provided through recognition, visibility, and inclusion of knowledge performance in appraisal systems and incentives (Hariharan, A. 2002, 2005). The motivation could be either intrinsic or extrinsic. Rewarding and recognizing an employee with tangible form for their knowledge sharing efforts is extrinsic

motivation while intrinsic motivation is of an intangible nature (Bhirud, S. et al. 2005). Employees share their knowledge easily when motivated. Lack of motivation and reward system is also a barrier because it discourages people to create, share, and use knowledge (Perrin, A., et al. 2007; McLaughlin, S., et al. 2008). Without the establishment of organizational reward and recognition systems, it is very difficult to align the KM and business needs of the organization (Witt, R. 1999).

2.4.1.2 Change management and EWRM

Organization can leverage knowledge so as to sustain its long-term competitive advantage. However, competitive conditions keep changing (Fehér, P. 2004); and hence the organization needs to adjust itself to the new changes so that it can survive. Changes have to be managed and implemented by people/employees (Clarke, J.C., Varma, S. 1999; Chapman, J.R. 2006: pp437-439). However, employees sometimes resist change (Paton, R.A., McCalman, J. 2008: pp52) because they have to give up the usual methods of work and behavior. Resistance to change can be very critical especially in the case of knowledge intensive companies (example- telecommunications), as the employees may want to understand the reasons and to have communication from the management (Tampoe, M. 1993; Kim, W.C., Mauborgne, R. 2003; Paton, R.A., McCalman, J. 2008: pp48-51).

To implement EWRM, it would incorporate change management strategies (Roberts, A. et al. 2003: pp2/34; Lam, J. 2007). One of the strategies is ‘setting the tone at the top’ since EWRM initiatives require the support from senior management in order to be successful. There has to be a mindset change so as to embrace business case for EWRM (Lam, J. 2007). According to Rao, A., Marie, A. (2007: pp21-22):

“There are four EWRM change enablers that must be in place for systematic implementation of EWRM in the business organizations: leadership, communication, involvement, and measurement. Leadership credibility is essential to motivate employees to recognize the importance of EWRM. The business organization should have a communication-rich culture in order to create lasting EWRM change. Communication is the glue that holds an organization and its people together. Employees need to be involved in the EWRM process every step of the way in order to bring the EWRM culture into the company. If managers do not have the right information from EWRM processes, they cannot make appropriate decisions about

the right course of EWRM action. Businesses can customize an array of proven EWRM tools, such as probabilistic scoring models, and establish a comprehensive KPI against which to determine appropriate EWRM action.”

A critical component of the change management program is to ensure that performance measurements and incentives are aligned with EWRM goals and desired behavior. EWRM as a substantial initiative, intended to help an organization be more resilient in times of uncertainty, expects an organization's internal culture to be a significant factor in EWRM deployment (Miccolis, J. A., et al. 2003; Roberts, A. et al. 2003; pp2/39-47; Conference Board, 2005; Kimbrough, L. R., Compton, J. P. 2009).

2.4.2 Knowledge Sharing

2.4.2.1 Knowledge creation

The ability to create new knowledge is often at the heart of the organization's competitive advantage. Knowledge creation according to Nonaka, I., Takeuchi, H. (1995) is about continuous transfer, combination, and conversions of the different types of knowledge. Knowledge is created through practice, collaboration, interaction, and education, as the different knowledge types are shared and converted (Krogh, Georg von. et al.2000). Beyond this, knowledge creation is also supported by relevant information and data which can improve decisions and serve as building blocks in the creation of new knowledge. The role of management in the knowledge creation process is as follows (Nonaka, I., Takeuchi, H. 1995; Krogh, Georg von. et al. (2000) :

- To enable and encourage knowledge sharing: management must understand where and in what forms knowledge exists. They must then provide the right forums for knowledge to be shared.
- To create a suitable work environment: this includes the notion of creating interplay between knowledge and knowing. It implies allowing new knowledge to be created through interaction, practice, and experimentation. Levitt, B., March, J. G. (1988) discusses how our cultural norms often stifle innovation and new knowledge creation.
- To provide systems that support the work process for knowledge creation (McLaughlin, S., et al. 2008) these can be groupware systems that facilitate communication or

- brainstorming. However, they must not interfere with creative processes or communities of practice, or enforce rigid organizational practices.
- To provide knowledge workers with timely, relevant information and data. In today's fast paced environment this is virtually synonymous with the implementation of IT systems (Riege, A. 2005) which can store, retrieve, organize, and present information and data in a helpful way.

2.4.2.2. Knowledge created and shared in an organization

People are important to the creation, capture, and sharing of knowledge (Goh, S.C. 2002; Smale, A. 2007). The effective flow of knowledge is only sustainable through people. Knowledge Management with respect to people is often in the context of human or technology interface in the information capturing process. Nonaka, I., Takeuchi, H. (1995) suggest that knowledge, unlike information, is about beliefs and commitment. Earl, M. (2001) argues that knowledge can be captured and codified so as to exploit and leverage it for the organization's benefit. Nonaka, I., Takeuchi, H. (1995) went on to propose grouping knowledge into two distinct types: tacit and explicit. Where tacit knowledge is personal, context-specific and therefore hard to formalize and communicate, explicit knowledge is codified, more formal and easier to transmit. Nonaka, I., Takeuchi, H. (1995) believes that for knowledge to be effectively shared, tacit knowledge need to become explicit so that it can be exploited by an organization. It is important to note the interaction between tacit and explicit knowledge is performed by an individual and not the organization. Knowledge management is primarily about making tacit knowledge more accessible since it accounts for a majority of an organization's collective knowledge (Jasimuddin, M.S. 2008). Small, C., Sage, A. (2006) carried out a review on knowledge management and knowledge sharing; they regarded knowledge sharing as critical in knowledge creation and found that factors influencing knowledge sharing included business context, organizational structure and roles, business processes, motivation, means, ability and others. Knowledge sharing has a strong social dimension in which knowledge work may best be practiced in informal settings that assimilate social exchanges (Jasimuddin, M.S. 2008). Corti, E., Lo Storto, C. (2000) gave examples of common coffee and lunch breaks as settings that enable knowledge sharing due to the fostering of personal closeness. For effective knowledge transfer or sharing it is argued (Goh, S.C. 2002; Jasimuddin, M.S. 2008) that management of knowledge is becoming an important strategy for organizations seeking to ensure sustainable competitive advantage.

Cohen, W.M., Levinthal, D.A. (1990) suggests that knowledge sharing is a critical factor in an organization's ability to respond quickly to change, innovate and achieve competitive success. There is evidence (Argote, L., Ingram, P., 2000; Argote, L., et al., 2000) which indicates that organizations which share knowledge within their business units (Goh, S.C. 2002) are likely to be more productive compared to those that are less inclined to sharing.

2.4.2.3 Knowledge Sharing and EWRM

Risk knowledge sharing is part of the people interactions in an organization (Rodriguez, E., Edwards, J. 2010). People in the organization are from different disciplines with different knowledge and experiences (McLaughlin, S., et al. 2008). The diversity of the interactions and knowledge imply a potential benefit for applying Knowledge management to EWRM. Marshal, C., Prusak, L. (1996) observes that "Risk Management is frequently not a problem of lack of information, but of knowledge with which to interpret its meaning" and once a new risk is identified, it implies that new knowledge is required (Fourie, L., Shilawa, J. 2005; Shaw, J. 2005; Caldwell, F. 2008).

Current business complexities call for more knowledge on risks (Sutcliffe, K., Weber, K. 2003) in order to build actionable responses. However, risk exposures and the losses in the previous years introduced doubts about the risk management practices even before the recent crisis (Rodriguez, E., Edwards, J. 2010). Knowledge is a factor to reduce risk and contributes (Caldwell, F. 2008; Dickinson, G. 2001) to business strategy and control. Risk management can be influenced by the knowledge transfer attributes such as work satisfaction (Dickinson, G. 2001; Liao, S. H., et al. 2004) and the capacity to share knowledge without increasing the number of people sharing (Alavi, M., Leidner, D. 2001). Risk knowledge sharing can be negatively influenced by business silos (Rodriguez, E., Edwards, J. 2010) taking into consideration that the speed of change can reduce the value of experience in some specific fields (Hayward, M. L. A. 2002).

2.4.2.4. Knowledge Sharing Barriers

As observed from the previous sub-section, knowledge sharing is a key aspect of organization's knowledge-management (KM) strategy. Riege, A. (2005) observes that "despite the growing significance of knowledge sharing's practices; there are a number of barriers that make it difficult for Knowledge management to achieve the goals and deliver a positive return on investment". These barriers are highlighted below.

Potential individual barriers to knowledge sharing

At an individual/employee level, barriers to knowledge sharing originate from individual (group of people) behavior or perceptions within business functions (Riege, A. 2005). Knowledge-sharing barriers are often related to factors such as people not motivated to share information (Perrin, A., et al. 2007; McLaughlin, S., et al. 2008), lacking communication skills and social networks, differences in national culture, over emphasis of position statuses, and lack of time and trust (Riege, A. 2005; Staplehurst, J., Ragsdell, G. 2010). Ability of employees to share knowledge depends first and foremost on their communication skills (Mathew, V; Kavitha, M. 2009) both verbal-sharing tacit knowledge and written-sharing explicit knowledge (Davenport, T.H., Prusak, L. 1998; Hendriks, P. 1999; Meyer, P. 2002). Verbal language in knowledge transfers is therefore critical (Marschan, R., et al. 1997; Fai, F., Marschan-Piekkari, R. 2003; Feely, A.J., Harzing, A.W. 2003). Another potential barrier is employees' national culture which can impact on knowledge-sharing practices (Husted, K., Michailova, S. 2002; Straub, D., et al., 2002; Ford, D.P., Chan, Y.E. 2003; Michailova, S., Husted, K. 2003; Moeller, K., Svahn, S. 2004), including cross-cultural sharing barriers based on organizational culture (Chow, C., et al., 2000; McDermott, R., O'Dell, C. 2001). Obstacles related to national culture and language barriers are considerably relevant and critical to multinational companies such as MTN group, in knowledge sharing practices between its subsidiary companies across Africa and Middle East.

Potential organizational barriers to knowledge sharing

One of the key issues of sharing knowledge in an organizational context is related to the right corporate environment (McLaughlin, S., et al. 2008). According to Riege, A. (2005:pp26) the following can be considered organization-based barriers to knowledge sharing:

- *Lack of leadership and managerial direction in terms of clearly communicating the benefits and values of knowledge sharing practice,*
- *Shortage of formal and informal spaces to share, reflect and generate (new) knowledge,*
- *Existing corporate culture does not provide sufficient support for sharing practices,*
- *Knowledge retention of highly skilled and experienced staff is not a high priority,*

- *Shortage of appropriate infrastructure supporting sharing practices, communication and knowledge flows are restricted into certain directions (e.g. top-down),*
- *Hierarchical organization structure inhibits or slows down most sharing practices;*
- *Size of business units often is not small enough and unmanageable to enhance contact and facilitate ease of sharing.*

Providing an appropriate infrastructure and sufficient resources to facilitate sharing practices is the basis of a successful KM program (Gold, A.H., et al., 2001; Schlegelmilch, B.B., Chini, T.C.2003; Riege, A. 2007; McLaughlin, S., et al. 2008; Singh, D.M., Kant, R. 2008). Further, the success or failure of a knowledge sharing strategy is dependent on its integration into the goals and strategy of the organization (Doz, Y., Schlegelmilch, B.B. 1999; Hansen, M.T., et al., 1999). Master, M. (1999) emphasized the importance of this integration noting that the most successful programs are those that are inextricably tied to the business and its strategic objectives. It is the responsibility of senior management to communicate those goals and strategies to all employees in a transparent fashion in order to obtain support.

Potential technology barriers

Knowledge sharing is as much a people and organizational issue (Riege, A., 2005) as it is a technology challenge. It is imperative to have interactions between people and technology to facilitate sharing practices (Davenport, T.H. 1996). Ruddy, T. (2000) argued that improving knowledge sharing in a meaningful way requires a delicate marriage of technology with a keen sense of cultural or behavioral awareness. It is important to create an environment in which people both want to share what they know and make use of what others know. Technology has the ability to offer instant access to large amounts of data and information, which can be shared by teams (Riege, A., O’Keeffe, M. 2003). Therefore technology can act as a facilitator to encourage and support knowledge sharing processes by making knowledge sharing easier, faster and more effective. The key issue, however, is to choose and implement a suitable technology that provides a close fit between people and organizations (McLaughlin, S., et al. 2008; Singh, D.M., Kant, R. 2008). Riege, A. (2005:pp29) observes:

“Lack of integration of IT systems and processes impede on the way people do things, lack of technical support (internal or external) and immediate maintenance of integrated IT systems obstructs work routines and communication flows, unrealistic

expectations of employees as to what technology can do and cannot do, lack of compatibility between diverse IT systems and processes, mismatch between individuals' need requirements and integrated IT systems and processes restricts sharing practices, reluctance to use IT systems due to lack of familiarity and experience with them, lack of training regarding employee familiarization of new IT systems and processes and Lack of communication and demonstration of all advantages of any new systems over existing ones”.

Technology today (Riege, A., 2005; McLaughlin, S., et al. 2008) is a main driver of activities in most industry sectors including telecommunications.

Section Summary.

Organizations are operating in very complex and competitive conditions which keep changing and therefore need to adjust with the new changes in complex situations so that they can survive. Change risks have to be managed and implemented by people. To manage the change risks holistically, it would call for implementation of EWRM. However, this would incorporate change management strategies. Any EWRM initiatives require the support from senior management in order to be successful.

Organization can leverage knowledge to sustain long-term competitive advantage through people. People are therefore important to the creation, capture, and sharing of knowledge. Risk knowledge sharing is part of the people interactions in an organization. People are from multiple disciplines with different knowledge and experiences working together. Risk management is frequently not a problem of lack of information, but rather lack of knowledge with which to interpret its meaning. Knowledge is a factor to reduce risk and contributes to business strategies and control. However, risk knowledge sharing can be negatively influenced by business silos.

Despite the growing significance of knowledge sharing's practices; there are a number of barriers that make it difficult for Knowledge management to achieve its goals. At an individual/employee level, barriers to knowledge sharing originate from individual (group of people) behavior or perceptions within business functions. Knowledge-sharing barriers are often related to a number of factors such as: people not motivated to share information, language barriers, employees' national culture, organizational culture, and lacking communication skills.

Organization-based barriers to knowledge sharing arise from the lack of leadership and managerial direction in terms of clear communication of the benefits, values of knowledge sharing practice, and not allowing formal and informal sharing within the organizational structure.

The potential technology barriers to knowledge sharing arise from: Lack of integration of IT systems and processes which impede on the way people do things, lack of technical support (internal or external) and immediate maintenance of integrated IT systems that obstruct work routines and communication flows, and unrealistic expectations of employees as to what technology can and cannot do.

Generally, the change and knowledge sharing approaches can have a critical impact to the EWRM implementation barriers in the organization. It is the above aspects of change and knowledge sharing that have formed part of this study on EWRM implementation barriers. Next section 2.5 reviews the information from all sections (2.2 up to 2.4) and develops a conceptual model to answer the research problem.

2.5. Theoretical Framework on EWRM.

The purpose of this section is to review the information from all sections and build a conceptual model for EWRM implementation. Having reviewed the literature on EWRM framework, the researcher endeavored to answer the research problem by developing a conceptual model around the following dimensions:

- *Understanding and Perception of EWRM*
- *Challenges in implementation of EWRM*
- *Change and Knowledge sharing perspective of EWRM*

2.5.1. The elements of the theoretical frame work:

2.5.1.1 Understanding and Perception of EWRM

Risk management has become very important due to the increasing pace of innovation, corporate governance and compliance, change in technology, and innovation. However, there is no universally accepted definition of risk in the literature, and differences occur in context and purpose of use. Since there is no accepted definition for risk, this may be a source which

can contribute to misunderstanding of EWRM. Further complication arises when risk bears the meaning of either hazard or loss and opportunity or gain. From the interdisciplinary perspective, risk can have different meaning to the people in the enterprise. People may perceive risk differently; hence it is important to appreciate this situation in the process of EWRM implementation. From this perspective, there is relevance to this study to investigate how people in the organization understood and perceived the EWRM, and what would motivate them to implement it.

2.5.1.2 Challenges in the Implementation of EWRM

Corporate failures can be caused by different forces including inefficient risk management practices (Manab, A.N., et al. 2010). However, it was noted that the practice of EWRM across different industry sectors was in different stages and remained a relatively new and unproven practice (Rao, A., Marie, A. 2007), with little agreement about the end destination and stages of transition. Deloitte (2004) survey, found that most of the firms analyze their risks but lay their focus on financial risks. Furthermore, risk management activity is still more reactive, than proactive.

Most of the companies with EWRM in place used it solely for complying with regulatory minimum requirements and meeting rating agency expectations. This could indicate the level of understanding of the EWRM by business managers, which seemed to be clouded in misconceptions (Acharyya, M., Johnson, J. 2006; Fraser, R. S. J., Simkins, J. B. 2007) about both the approach and the process that could be an obstacle to successful implementation. Relatively few organizations (Hexter, E., et al, 2008) understood the importance of developing an EWRM approach (Slywotzky, A. 2004; Calandro Jr. J; Lane, S. 2006; PWC, 2009; Zand, E.D. 2009; Economist, 2009).

It is from this perspective, that there is relevance to this study to research on challenges encountered in the implementation of EWRM as observed in various case studies above, to the extent that only 28% (Beasley, S.M., et al. 2010) of all respondents surveyed described their current stage of EWRM implementation as systematic, robust and repeatable with regular reporting to the board.

2.5.1.3 Change and Knowledge sharing perspective of EWRM

EWRM implementation would incorporate change management strategies (Roberts, A., et al. 2003; pp2/34; Lam, 2007) which would be adopted by the people in the organization so as to ensure that key risk management policies and processes are fully implemented. EWRM initiatives would require the support from senior management in order for it to be successful. People are important in the creation, capture, and sharing of knowledge (Goh, S.C. 2002; Smale, A. 2007) as highlighted in Sub-Section 2.4.2.1. Risk knowledge sharing is part of the people interactions in an organization (Rodriguez, E., Edwards, J. 2010). However, people in organizations are from multiple functions with different knowledge and experiences (McLaughlin, S., et al. 2008) as observed in Sub-Section 2.4.2.2. Knowledge sharing is a key aspect of organization's knowledge-management (KM) strategy. However, there are a number of barriers highlighted in the Sub-Section 2.4.2.3; which make it difficult for Knowledge management to achieve its goals.

Hence, issues of change management have to be addressed in order to achieve the buy-in for EWRM implementation. Knowledge sharing with respect to risks in the organization, need to be shared across the entire company. However, people, organizational and technological structures can be EWRM implementation barriers. Therefore, there is relevance to this study to research on how change and knowledge sharing aspects can impact on EWRM implementation.

2.5.2. Gaps in the literature

From the literature review, it is clear that EWRM is an evolving field and cuts across many disciplines. There are very few academic researches to date, as highlighted above in Section 2.3.5. However, there is a large non- academic literature base, scattered and focused mainly on financial institutions. These studies, although interesting, are insufficient to provide a complete picture of EWRM implementation barriers in an African telecommunications enterprise. Besides, most of the said studies and the surveys were carried out in either Europe or North America. It was from this perspective that the researcher undertook to study in depth the EWRM implementation barriers in an African Telecommunications Enterprise.

2.5.2.1 Research problem, aims, research questions

Ernst & Young (2008, 2009) highlighted a number of strategic and operational risks faced by Telecommunication operators in Africa and how effectively the operators responded to the risks determined their competitive advantages. DeLoach, J.W. (2000) suggests that management of risks could suitably be implemented through a model of EWRM which is integrative in nature.

Arising from the existing body of literature, there is not much research studies undertaken that investigated the extent of EWRM implementation barriers in an African Telecommunications Enterprise. Hence, this study attempts to fill this gap by investigating the following research problem, aim and the research question:

Research Problem:

- *What are the Implementation Barriers to the Introduction of Enterprise-Wide Risk Management (EWRM) In an African Telecommunications Enterprise?*

The main aim of this research is:

- *To investigate the implementation barriers associated with introduction of EWRM in an African Telecommunications Enterprise.*

To investigate the research problem based on the aim of this research, the following specific research questions (RQ) were developed:

- **RQ1.** What are senior executive and mid-level management perceptions and understanding of an EWRM? (Sub-Section 2.5.1.1)
- **RQ2.** What are the potential motivators for the implementation of EWRM? (Sub-Section 2.5.1.2)
- **RQ3.** What are the principal risks associated with introducing an EWRM and how may they be managed? (Sub-Section 2.5.1.2)
- **RQ4.** Describe any anticipated barriers to implementation of EWRM. (Sub-Section 2.5.1.2)
- **RQ5.** Would knowledge sharing and enhanced communication assist in overcoming the EWRM implementation barriers? (Sub-Section 2.5.1.3)
- **RQ6.** What strategies could be adopted to overcome the implementation barriers associated with EWRM? (Sub-Sections 2.3.4 and 2.5)

2.6. Conclusions of the Chapter

This chapter has provided a context for understanding the EWRM by reviewing the existing literature. It has been organized into six sections: Introduction, risk overview, enterprise – wide risk management, change, knowledge and sharing, the theoretical framework and conclusions.

In section 2.2, an over view on risk and risk management was emphasized as arising from an increasing pace of innovation, corporate governance and compliance, change in technology. It was identified that there was no universally accepted definition of risk in literature, and differences occurred in context and purpose of use. From the interdisciplinary perspective, risk had different meaning to the people from different disciplines in the enterprise and this would have implications in the EWRM implementation. Therefore, there was relevance to this study to investigate how people in the organization understood and perceived the EWRM, and what would motivate them to implement it.

In Section 2.3, risk management approaches of early years were reviewed. It was noted that the multidimensional perspectives of risk were never considered. Evolution ushered in EWRM which considered all risks from a more integrated holistic perspective including strategic risks. However, EWRM implementation was not easy for industries. It was emphasized that Leadership of the board of directors and executive management played an important role in the adoption and the successful EWRM implementation. Academic and Case studies researches were reviewed and highlighted various benefits of embracing EWRM and associated implementation challenges.

In Section 2.4, Organizations were operating in very competitive environment which kept changing. Organizations needed to adjust with the new changes in order for them to survive. It was also highlighted that management of change risks called for EWRM implementation. It was highlighted that organizations leveraged knowledge to sustain their long-term competitive advantage through people. Risk knowledge sharing was part of the people interactions in an organization. However, people came from multiple disciplines with different knowledge and experiences working together. Knowledge was a factor to reduce risk and contributed to control and business strategies. There were barriers to knowledge sharing originating from people, organizational structure, technology and processes which impeded on the way people shared knowledge.

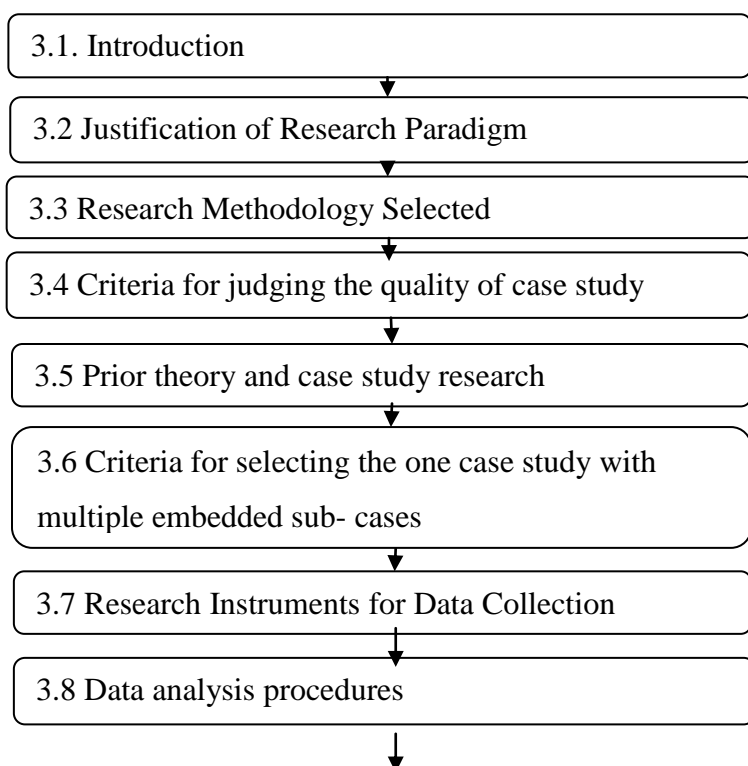
In Section 2.5, the preliminary theoretical framework for this study based on a review of the literature was developed. Gaps in the literature were presented, research problem, aims and questions were developed. From these foundations, the next chapter discusses the research methodology.

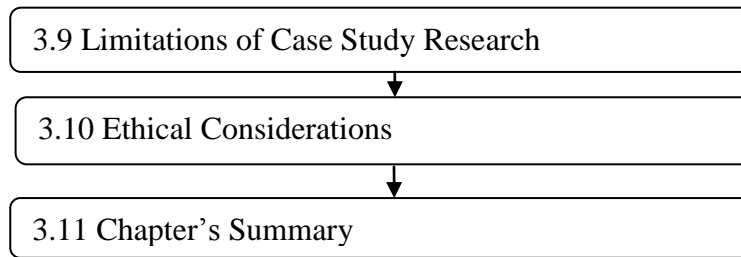
CHAPTER 3 - RESEARCH METHODOLOGY

3.1 Introduction

Chapter two provided a review of the literature on EWRM. Arising from gaps in the literature, six research questions were developed. This chapter describes the methodology used in collecting the data in response to the research questions. After this introduction, an outline of scientific paradigms is presented in Section 3.2 where *realism* as the scientific research paradigm appropriate for this study is justified. In Section 3.3, the choice of case study method is justified as a rigorous empirical inquiry for this study, while in Section 3.4, a range of criteria for judging the quality of case study design is presented. The issue of the role of prior theory with the case study research and the arguments therein is explored in Section 3.5. Section 3.6 presents the choice of a one case study with multiple embedded sub-cases justified by extensive references to the research identifying criteria for justification. In Section 3.7, the research instruments for data collection are discussed, including the role of the case study protocol and the selection criteria for interviewees. Section 3.8, highlights how the data collected would be analyzed. Limitations of case study research are discussed in Section 3.9, while the ethical considerations are discussed in Section 3.10. This chapter's summary is presented in Section 3.11. Sections are outlined in Figure 3.1 below.

Figure 3. 1: Outline of Chapter 3





Source: Author

3.2 Justification of Research Paradigm

This Section describes the nature of scientific paradigms, outlines four major paradigms and justifies the selection of scientific realism for this investigation as detailed in Table 3.1. The pursuit of scientific inquiry encourages researchers to examine their fundamental assumptions about what constitutes reality, knowledge and inquiry regarded as issues in ontology, epistemology and methodology respectively (Guba, E.G., Lincoln, Y.S. 1994; Perry, C., et al.1999; Sobh, R., Perry, C. 2005; Lincoln, Y., et al.2011). The scientific community has coined different sets of assumptions into what have come to be known as the ‘scientific paradigms’; understood as perspectives for determining how researchers view, investigate and understand reality (Creswell, J. W. 2007; Bryman, A., Bell, E. 2011).

A paradigm is ‘a worldview consisting of a set of basic beliefs or metaphysics that deals with ultimate or first principles’ (Guba, E.G., Lincoln, Y.S. 1994:pp107). It involves a framework of beliefs, values shared by the members of a specific professional community (Carson, D. J., et al. 2001; Bryman, A., Bell, E. 2011). In this sense, a paradigm defines the nature of the world, the individual’s place in it and the range of possible relationships to that world and its parts. People whose research is based on a shared paradigm are committed to the same rules. ‘The commitment and the apparent consensus that it produces are the bases for the genesis and continuation of a particular research focus and set of answers’ (Kuhn, T.S. 1962: pp11). Inquiry paradigms ‘define for researchers what they are about and what falls within and outside the limits of legitimate inquiry’ (Guba, E.G., Lincoln, Y.S. 1994, pp108).

There are two approaches to theory development: deductive theory testing and inductive theory building (Perry, C. 1998; Bryman, A., Bell, E. 2011). Their differences are reflected in two main scientific paradigms: the deductive approach represented in the positivist paradigm, and the inductive approach represented in the phenomenological (Easterby-Smith, M., et al .2008; Smith, A. 2009) or interpretive (Carson, D. J., 2001; Bryman, A., Bell, E. 2011)

paradigm. The latter includes three further differentiated paradigms including critical theory, constructivism and realism. These alternative inquiry paradigms compete on three fundamental but interconnected assumptions (Guba, E.G., Lincoln, Y.S. 1994; Healy, M., Perry, C. 2000; Sobh, R., Perry, C. 2005) given below:

1. *Ontology, which refers to the form and nature of the reality that researchers investigate;*
2. *Epistemology, which explains the relationship between the researcher and that reality;*
and
3. *Methodology, which defines the techniques used by the researcher to examine that reality.*

Comparison of the respective assumptions of these paradigms in terms of their perspectives on the elements of ontology, epistemology and methodology are presented in the Table 3.1 below.

Table 3. 1: The Research Paradigms

Paradigm	Elements of			Application in this study
	Ontology	Epistemology	Research Method	
Positivism	Reality is real, Apprehensible and independent of the knower.	The researcher does not influence what is known even in acts of knowing such as deductions and interpretations.	Concerned with quantitative methods such as experiments and surveys to generate data and verify hypotheses.	Paradigm not suitable for this study as it calls for analysis of large quantitative data.
Critical Realism	Reality is “real” but only imperfect, and probabilistically apprehensible and so triangulation from many sources is required to try to know it	This reality can be known mostly by induction; the knower is fallible influencing and being influenced by what is known and must create processes to establish and Maintain objectivity.	Case studies involving in-depth interviews, triangulation of data sources	Suitable for this study because the concern is to understand complex phenomena, whose results are to be tested for objectivity and theory building
Critical Theory	Reality is not subsistent but is shaped by social political, economic and other forces. the role of the researcher is to liberate participants from deterministic social structures and	The researcher transforms the reality studied proposing alternative frameworks and interpretations in accordance with own values	Action Research	Not suitable because this perspective seeks change whereas this study seeks to explore, understand and interpret Phenomena.

Paradigm	Elements of			Application in this study
	Ontology	Epistemology	Research Method	
	interpretations			
Constructivism	There is no Subsistent reality but rather only that which is constructed by knowing Subjects.	Objectivity is not a concern as the reality constructed by the knower is the really real.	In-depth interviews	Not suitable because objectivity is a critical concern for this study as discussed in Section 3.4

Source: Adapted and modified from Sobh, R., & Perry, C. (2005: pp1195); Perry, C., Riege, A., Brown, L (1999: pp1950).

A researcher often chooses the paradigm that best suits the nature of the inquiry being conducted. For research purposes, data can be quantitative or qualitative (Perry, C. 1998; Yin, R. K. 2009; Bryman, A., Bell, E. 2011). Qualitative research provides insights and understandings, while quantitative tries to generalize these insights to a population. Qualitative research is appropriate when ‘the need is to understand certain phenomena’ (Carson, D. J., et al. 2001: pp 64). The focus of this case study was presented as, ‘*What are the Implementation Barriers to the Introduction of Enterprise-Wide Risk Management (EWRM) In an African Telecommunications Enterprise?*’ and the six research questions arising from gaps in the literature ruled out any substantial theory testing; which necessitated rejection of the positivist paradigm for this study.

Theories are developed through the process of inductive reasoning (Perry, C. 1998), described by Zikmund, W.G. (1997:pp28) as ‘the logical process of establishing a general proposition on the basis of observation of particular facts’. The constructivism paradigm holds that individuals or groups construct realities that are not ‘true’ but based on their own perceptions of reality (Perry, C., et al. 1999). Thus, the findings of the research are created between the investigator and the subject during the inquiry and knowledge becomes those constructs about which there is general consensus. On this basis, the constructivist paradigm was also rejected for this study.

The critical theory paradigm (Table 3.1) was rejected in that the concern of this study is to identify what are EWRM implementation barriers in an African telecommunications enterprise. The researcher is not concerned with influencing or transforming how a telecommunications enterprise went about implementing EWRM.

The arguments above leave the option of the critical realism paradigm, which matched the aims and objectives of this inquiry as justified in Section 3.2.1 below.

3.2.1 Justification for the critical realism paradigm

The Research problem for the study was in-depth study seeking to identify and assess the ‘EWRM implementation barriers in an Africa telecommunications enterprise’. In the process of seeking to identify implementation barriers there were many perceptions to observe directly in the social world. Human behavior includes un-observable phenomena such as emotions, perceptions, interpretations, values and beliefs, which cannot be understood without reference to the meanings and purposes attached by human actors to their activities (Guba, E.G., Lincoln, Y.S. 1994; Sobh, R., Perry, C. et al 2005). Such observable phenomena constitute the qualitative data for this study in the attempt to provide answers to the research problem (Easterby-Smith, M., et al 2008). The task of the researcher was to understand the different constructions and meanings people placed on their experience. The data by which such phenomena were observed consisted of words which provided rich insight into meanings and behavior (Carson et al. 2001). In this context, qualitative research methods served the investigation of management decision-making better than many other research methods (Carson, D. J., et al. 2001; Easterby-Smith, M., et al. 2008; Bryman, A., Bell, E. 2011). Based on the argument in this Section, the choice of the critical realism paradigm is justified for this study.

3.3 Research Methodology Selected

Academic research is mainly classified in terms of purpose, process, logic and outcome. However, each category is further classified into different sub-categories. In terms of the purpose, research is categorized into exploratory and explanatory (Roberts, A; Wallace, W. 2005). In terms of the process, research is classified into qualitative and quantitative. In terms of logic, research is classified into deductive and inductive. In terms of outcome, research is classified into applied research and pure research (Roberts, A. et al. 2005). Academic research perspectives sometimes are based on the grounded theory. Each of these distinctions was explored in turn and the research strategy classified accordingly. The case study research methodology was considered appropriate research strategy for this study on the basis of justification given below.

3.3.1 Exploratory and Explanatory Research

In identifying the purpose of the research, it is important to provide answers to the key questions such as why the subject needs to conduct research (Aaker, A. A., et al. 2001). The purpose can be framed as either exploratory or explanatory. Explanatory (analytical), seeks to show a relationship between two variables in which one variable leads to specific effect on the other (Cooper, D.R., Schindler, P.S. 2008), whereas, Exploratory research aims to look for patterns, ideas or hypothesis rather than testing or confirming a hypothesis against empirical evidence, in which the data is based on observation or experience (Trochim, W. M. 2006; Yin, R.K. 2009). The focus is on getting insights and familiarity with the subject area for more rigorous investigation at a later stage. Exploratory research forecasts the likelihood of a similar situation occurring elsewhere while identifying and controlling the variables in the research activities (Bryman, A., Bell, E. 2011). The purpose of this study is to explore the EWRM implementation barriers; hence, the research is more of exploratory in approach than otherwise.

3.3.2 Qualitative research and quantitative research

In terms of the process, research can be divided into two parts: qualitative and quantitative. The findings of the qualitative research are not arrived at by statistical procedures (Guba, E.G., Lincoln, Y.S. 1994). The data collected is concerned with the real views/opinions of people: what they say, how they perceive, understand and experience the EWRM implementation. It is about organizational functioning, social movements, cultural phenomena and interactions between social factors (Creswell, J.W. 2007; Cooper, D.R., Schindler, P.S. 2008). The findings of the quantitative research focus on the quantification of phenomena to produce findings using numerical data through an objective, formal and systematic process (Guba, E.G., Lincoln, Y.S. 1994; Saunders, M., et al. 2009; Bryman, A., Bell, E. 2011).

A lot of debate has been raging on, about the two approaches. However, in this study quantitative and qualitative data is collected for the same study (Patton, M. Q. 2002), and employed in a complementary fashion (DeRuyter, K., Scholl, N. 1998), to the extent that it has not involved an either-or methodological choice (Mason, J. 1996) except where it is appropriately justified. The mixed approach techniques allowed the strong points of one to balance the weak points of the other (DeRuyter, K., Scholl, N. 1998). It is not a question of whether quantitative research is better than qualitative research, but which approach is more

relevant to the research problem and the context of the investigation (Gable, G.G. 1994). In view of the above, a mixed approach is considered appropriate for this study.

3.3.3 Inductive research and Deductive research

A research can be classified into either inductive or deductive research. Inductive research is a study in which theory is developed from the observation of empirical reality (Bryman, A., Bell, E. 2011). General assumptions are induced from particular instances; from individual observation to statements of general patterns or laws. Thus, inductive research moves the study from particular to general. In contrast, deductive research is a study in which a conceptual and theoretical structure is developed and then tested by empirical observation (Bryman, A., Bell, E. 2011). The particular instances are deduced from general inferences in order to move from general to particular (theory- hypothesis- observations- confirmation). Arising from literature review little has been written about the nature of EWRM implementation barriers in African telecommunications enterprises, so there is no sufficient basis to develop hypothesis. Hence this research is classified as inductive.

3.3.4 Applied research and pure research

In terms of the outcomes applied research is designed to apply its findings to solve a specific and existing pragmatic problem (Easterby-Smith, M., et al.2008; Saunders, M., 2009). Applied research develops a real world scenario utilizing pure research. In this sense, applied research builds on selected findings from pure research (Saunders, M., 2009). Like pure research, applied research focuses on original investigation in order to acquire new knowledge (Yin, R.K. 2009). However, it is diverted primarily towards a specific practical aim or objective (Easterby-Smith, M., et al .2008; Zikmund, W.G., et al. 2010). In contrast, pure research is less specific in nature and is conducted primarily to improve understanding of general issues without emphasis on its immediate application. The research questions in applied research are designed to produce comprehensive information on both the implementation and the effects of interaction. Applied business research in this sense includes EWRM implementation barriers in the telecommunications enterprise and is essentially problem solving rather than theory generating; hence this is what is pursued in this case study.

3.3.5 Grounded theory Research

Grounded theory research is a form of comparative case-oriented explanation-building related to ethnography. A researcher examines cases which are similar on many variables but which differ on a dependent variable in order to discern unique causal factors (Bryman, A., Bell, E. 2011; Zikmund, W.G., et al. 2010). Similarly, another researcher may examine cases which are similar on the dependent variable in order to discern common causal factors (Quinlan, C. (2011). In this way, advocates of grounded theory seek a continuous interplay between data collection and theoretical analysis (Bryman, A., Bell, E. 2011). Whereas the conventional scientific method starts with à priori theories to be tested and then collects data, grounded theory starts with data collection and then induces theory (Bryman, 2011). The researcher may even try to label variables in the terminology used by subjects in their perception of a phenomenon. In this way, grounded theory is context-based and process-oriented. Good grounded theory meets three criteria: (1) *fit*: it makes sense to those active in the phenomenon being studied; (2) *generality*: it can be generalized to a describable range of phenomena; and (3) *control*: it anticipates possible confounding variables that may be brought up by challengers to the theory (Bryman, 2011; Zikmund, W.G., et al. 2010). Aspects of the grounded theory may feature in this case study.

3.3.6. Case Study Method

The case study research method involves learning about a complex phenomena based on an in-depth understanding of that phenomena (Noor, K. B. M. 2008; Vissak, T. 2010). The understanding is obtained by extensive description and exploration of an analysis of that phenomenon taken as a whole in the context of specific organization (Eisenhardt, K., M. 1989; Yin, R.K. 2009; Briggs, A., Coleman, M. 2007). Case study method is defined as:

“...a research method which focuses on a particular part of an organization or an industry within its context in order to rigorously explore and analyze contemporary real-life experiences in-depth, using a variety of evidence.” (Riege, A., Nair, G. 1996: pp142)

An entire organization may be studied in-depth with meticulous attention to detail, with in-depth interviews providing understanding of a complex situation, gaining insight and suggesting hypotheses for quantitative research (Zikmund, W.G. 1997; Noor, K. B. M. 2008). Yin.R.K (2009, pp11) suggests that:

“...the case study’s unique strength is its ability to deal with a full variety of evidence—documents, artifacts, interviews and observations—beyond what might be available in the conventional historical study”.

The design of case study research is not totally isolated but often uses other methods such as grounded theory to some extent (Yin, R.K. 2009; Bryman, A., Bell, E. 2011). The case study approach is selected for the current study and the reasons are explored below.

Aim of the Case study

Case studies provide a description of phenomena, which help to develop theories (Yin, R.K. 2009). Case studies make it possible to understand the means social actors or managers assign to their own experiences. The detailed, in-depth description rendered by the case study permit the understanding of the empirical foundations of the theory (Vissak, T. 2010). The case study approach appears ideal for this study since it is used to present an account of the organization’s experience of EWRM implementation. Case study research satisfies the qualities of qualitative research of describing, understanding, explaining and identifying the EWRM implementation barriers in the African Telecommunications Enterprise which this research is set to explore.

Why case study fits with the realism paradigm

The interpretive/realism paradigm addresses concerns related to the changing and dynamic nature of EWRM from a holistic perspective. The key objective of this research is to explore the EWRM implementation barriers in the African telecommunications industry from an interdisciplinary perspective. It is achieved through analyzing the issues and concepts related to EWRM as established in the literature and the phenomena perceived in an African telecommunications enterprise. It is necessary to explain the direct experiences of managers from the perspective of social relationships that constitute their experiences towards the risk management in their respective operating companies. It is from the above perspective that the case study is found to be an ideal method when holistic, in-depth investigation is needed (Carson, D. J., et al. 2001; Yin, R.K. 2009; Bryman, A., Bell, E. 2011) and the case study approach is deemed suitable to serve the purpose of this study.

There are five research strategies and the conditions suitable for an inquiry. These strategies and the relevant conditions are identified and summarized in the Table 3.2.

Table 3. 2: Application to this study of relevant conditions for different research strategies

Strategy	Form of research question	Control required over behavioral Events?	Focuses on contemporary Events?	Application in this research study
Experiment	How, why?	yes	yes	Not applicable as the study has no control over behavioral events
Survey	who, what, where, how many, how Much?	no	yes	Not applicable as none of these questions are being addressed by this study
Archival analysis	who, what, where, how many, how much?	no	yes/no	Not applicable as none of these questions are being addressed by this study
History	How, why?	no	no	Not applicable because the study focuses on contemporary events
Case study	How, why *what?	no	yes	Applicable for this study. The question being asked is '*what' (Yin 2009:pp11), whereas the usual is a 'how' or a 'why'. The study has no control over behavioral events and focuses on contemporary events

Source: Yin (2009: pp8).

Case study method is preferred when the question is a 'how' question, (this case study has posed the main problem as *a 'what' as the initial focus -Creswell, J. W. 2007:pp107; Yin, R.K. 2009:pp11) since the inquiry focuses on contemporary events, and the researcher has no control over the events being studied (Yin.R.K. 2009). The research problem is “***What are the Implementation Barriers to the Introduction of Enterprise-Wide Risk Management (EWRM) In an African Telecommunications Enterprise?***” Events were not historical in that the inquiry sought to generate contemporary descriptive data for analysis. Given that the data sought were qualitative and involved the perceptions, interpretations, meanings, emotions and values of interviewees, the researcher could not have control over the events being studied. Based on this background, a case study research strategy is justified for this study.

3.4 Criteria for judging the quality of case study design

This Section discusses the criteria by which the quality of case study research is judged by the construct validity, internal validity, external validity and reliability (Cohen, L., et al.

2007; Yin, R.K.2009). The specific tactics employed at each stage of this research to ensure a high quality outcome, are summarized in Table 3.4 and discussed further below.

Table 3. 3: Tests for Quality in Case Study Method

Tests	Case study Method	Phase of research applicable	Methods in this Research study
Construct validity	Use multiple sources of evidence, establish chain of evidence and review draft case study	Data collection	1) Multiple sources of evidence consisting of multiple embedded Sub-cases with in-depth semi-structured interviews. 2) Chain of evidence created through development of case study protocol; linking of protocol content to research questions.
Internal validity	Pattern-matching	Data analysis	Choice of multiple embedded Sub-cases.
External validity	Use replication logic, in multiple case studies	Research design	Choice of multiple embedded Sub-cases, using replication logic;
Reliability	Use case study Protocol. Develop case study data base	Data collection	1) Development of case study protocol used across all Sub-cases 2) Development of case study database consisting of case study notes, documents including interview transcripts
Credibility Dependability Conformability	Literature Review Research Design Data Analysis Implications and Conclusions		1) Careful interpretation of literature review in Chapter Two. 2) Careful justification of the qualitative research methodologies established in Chapter 3, Section 3.3 3) Careful structuring of the data analysis to ensure full and descriptive evaluation and Assessments in Chapters Four and Five.

Source: adapted and modified from Carson et al. 2001; Yin 2009:pp41

Construct validity

Deals with the development of a sufficiently operational set of measures used to collect data (Yin, R.K.2009). Tactics are used to increase construct validity in this research, which include triangulation (Appendix M) of data through use of multiple sources of evidence. These sources include an extensive literature review, case study research protocol, pilot study, documents collected during the case studies, and multiple interviewees for collection of both quantitative and qualitative data.

Internal validity

Concerned with the internal coherence of the findings and the validity of causal relationships between variables investigated (Yin, R.K.2009). Case study research generally only allows for such relationships to be suggested within the study context rather than establish causation (Perry, C., et al. 1999), however, in this type of research, a high degree of internal validity is achievable due to the possibilities for cross-checking. For this research, internal validity was enhanced by the use of pattern matching and explanation building. Pattern matching involved comparing predictive patterns with multiple embedded Sub-cases and explanation building involved analyzing the collected data about the Sub-cases (Yin, R.K.2009).

External validity

This relates to how generalization of findings of the study can be applied more generally to other cases beyond the immediate case study (Easterby-Smith, M., et al .2008; Yin, R.K.2009). In case study methodologies, the researcher is generalizing the findings to a broader theory - analytic generalization - rather than to a broader population - statistical generalization (Yin, R.K.2009; Bryman, A., Bell, E. 2011). In this research, external validity was enhanced by the use of theoretical and literal replication (Section 3.6.4) in the selection of cases and via comparison of the findings with the literature (Yin, R.K.2009).

Reliability

This is concerned with the minimizing of errors and biases in the study so that a later investigator following the same procedures would arrive at the same findings and conclusions when conducting the same case study (Yin, R.K.2009). The reliability of case study research is often criticized due to its flexibility and absence of experimental control (Bryman, A., Bell, E. 2011). Reliability in this research was enhanced by the use of a case study research protocol, database and an interview guide.

3.5 Prior theory and case study research

The role of prior theory and the extant literature in case study research is discussed in this Section. Prior theory is critical in the defining of the research question in theory-building research and aids in determining both the type of organization to be studied and data to be collected (Eisenhardt, K. M. 1989).

3.5.1 Prior theory in qualitative research

It has been suggested that the theory-building researcher should commence with no prior theory or hypothesis as “pre-ordained theoretical perspectives or propositions may bias and limit the findings” (Eisenhardt, K. M. 1989: pp536). However, prior knowledge will inevitably influence the researcher who should be aware of this and avoid “uncritical appropriation of this reserve of ideas” (Perry, C. 1998: pp788). Thus starting from scratch with an absolutely clean theoretical slate is neither practical nor preferred.

Indeed, prior theory can enhance construct validity by allowing the development of more accurate measures in interview protocols and questionnaires and internal validity and reliability via the comparison of research findings with the extant literature (Eisenhardt, K.M. 1989). Inductive research is where theory emerges from data, whereas deductive research involves theory definition by the data (Eisenhardt, K. M. 1989; Easterby-Smith, M., et al. 2008). While some researchers have argued for more induction in case study research (Eisenhardt, K. M. 1989) and others for more deduction (Yin, R.K. 2009), it is unlikely that any researcher could, in reality, pursue a pure form of either approach, or want to. Perry, C. (1998, pp6) observes:

“Pure induction might prevent the researcher from benefiting from existing theory, just as pure deduction might prevent the development of new and useful theory”

Other researchers have argued that inductive and deductive methods are in fact complementary and should be exploited as such via research that combines both elements (Bryman, A., Bell, E. 2011). This is the approach considered most appropriate for this research as it allowed the researcher to benefit from existing theory. Thus, prior theory is viewed as some additional evidence that is used to triangulate on the external reality of the case study (Sobh, R., Perry, C. 2005). Prior theory provides sensitizing concepts for the research, while the data provides indigenous concepts for analysis and comparison. Thus, based on these perspectives the researcher reviewed the literature on EWRM in the Chapter Two which gave a basis for formulating the research questions.

3.6 Criteria for selecting the one case study with multiple embedded Sub- cases

3.6.1 Challenge facing the one case study

Qualitative research in general, and case study research methodology in particular, is faced with the challenge of overcoming a conceived bias, particularly from the academic community in relation to what are regarded as appropriate outcomes for the interpretive paradigm (Tellis, W. 1997; Carson, D. J., et al. 2001; Vissak, T. 2010). The conceived bias is based on assumption that the best scientific research produces statistical generalizations. This creates a source of misunderstanding of the kind of generalizations and outcomes appropriate for qualitative research (Tellis, W. 1997; Carson, D. J., et al. 2001; Yin, R.K. 2009). The bias stems from the traditional dominance of the positivist paradigm in scientific inquiry. The proposal of a one case study, albeit with embedded Sub-cases (Yin, R.K. 2009), may risk falling foul of such bias and confusion. Tellis, W. (1997, pp2) expressed it as:

“The inappropriate manner of generalizing assumes that some sample of cases has been drawn from a larger universe of cases. Thus, the incorrect terminology such as ‘small sample’ arises, as though a single-case study were a single respondent”.

The kind of outcomes which underpinned the choice of the single case study with embedded Sub-cases for this research was clarified and justified in the following sub-section.

3.6.2 Justification criteria for the single case study

Sub-Section 3.3.6 justified the choice of case study method for this investigation. It was suggested that the objective of a case study was not primarily to understand other cases, but rather to understand this one case (Yin, R.K. 2009; Vissak, T. 2010; Zikmund, W.G., et al. 2010). As a result, conclusions from the sub-cases were generalized to the theory and not to a population. In this context, research problem concerned with seeking a specific understanding about a small number or single phenomenon (Carson, D. J., et al. 2001, pp45). Depth of understanding requires methodologies such as in-depth interviews and analysis of a few sources which will achieve the appropriate amount and type of data. In addition, if only one industry or company is chosen there must be a commitment to in-depth investigation. Trade-offs between depth and width need to be recognized (Yin, R.K. 2009). Detailed observations entailed in the case study method are time consuming, but enable the investigation of many different aspects of a process, examine them in relation to each other,

view the process within its total environment and utilize the researcher's capacity for understanding and insight (Vissak, T. 2010). This is generally not possible with more than one or a very limited number of in-depth case studies (Yin.R.K. 2009). The case study is based on the comprehensiveness of measurements which makes it possible to reach a fundamental understanding of the structure, process and driving forces, rather than a superficial establishment of correlation or cause-effect relationships (Yin, 2009; Vissak,T. 2010). In order to provide this fundamental understanding, good descriptive or analytic language is necessary to grasp the interaction between various parts of a system, the important characteristics of a system and the possibilities to generalize to theory from very few cases, or even from one single case (Yin, R.K. 2009). Table 3.4 gives the summary of a significant number of authors who regarded the single case study as a substantive, in-depth and valuable research methodology within the interpretive paradigm and the case study method.

Table 3. 4: Summary of Authors Who Regard the Single Case Study as a Substantive, In-Depth and Valuable Research Methodology

A review of the methodological literature identifying six criteria for justification	Authors who regard the single case study as a Substantive and valuable research methodology
1) Comprehensive, rigorous exploration	Yin, R.K. 2009; Eisenhardt, K. M. 1989
2) Meticulous attention to detail	Tellis, W. 1997; Zikmund, W.G., et al. 2010; Yin, R.K. 2009.
3) In-depth analysis	Carson, D. J., et al. 2001; Yin, R.K. 2009
4) Results in in-depth understanding	Carson, D. J., et al. 2001; Zikmund, W.G., et al. 2010; Yin, R.K. 2009.
5) Provide analytical generalization	Carson, D. J., et al. 2001; Yin, R.K. 2009
6) The researcher must be closely involved with the phenomena and have the capacity of in-depth analysis and understanding and good descriptive and analytic language.	Carson, D. J., et al. 2001; Yin, R.K. 2009.

Source: Developed by the author

To further justify the single case study with embedded Sub-cases, Section 3.7 on the data collection procedures for this study, establishes its comprehensiveness and meticulous attention to detail. The rigor of exploration in this study is outlined in Section 3.4 where tests of quality for the study are described. In Section 3.8 the procedures for analysis and in-depth understanding are presented, with the research questions providing a structure for analytic generalization. The background of the researcher includes extensive academic training resulting in three Master Degrees from different universities, as well as an Accounting professional qualification, which all in one way or the other equipped the researcher with the

capability for in-depth understanding and good descriptive and analytic language (Carson, D. J., et al. 2001; Yin, R.K.2009). The position of the researcher is arguably unique in that he is immersed in the phenomena because of his role that spans more than twelve years in the organization being studied. Based on the arguments, this study meets all six criteria described in the methodological literature (Table 3.4) so far, and establishes single case study as a substantive and valuable study.

3.6.3 Yin's three criteria on justification of the single case design.

Further justification of the single case study is proposed by Yin, R.K. (2009:pp47). He suggests that any one of three conditions justifies the choice of single case design:

- a) "The first is the critical or extreme/unique case which provides an opportunity for testing a well-formulated theory, that is where the theory has a clear set of propositions, as well as the circumstances within which the propositions are believed to be true. This is not applicable to this case study".
- b) "The second is that of the extreme or unique phenomenon; which occurs so rarely that an investigator has an opportunity to observe and analyze a situation or event previously inaccessible to scientific investigation. Again this is not the situation in this study".
- c) "The third condition is that of the 'single revelatory case'. This occurs when an investigator has an opportunity to observe and analyze a phenomenon, not rare, but previously inaccessible to scientific investigation. This happens when few social scientists have had the opportunity to study the phenomenon closely and justifies the use of a single case study on the grounds of its revelatory nature".

This is precisely the situation in (point c) which this investigator found. Chapter Two established that there was little research in this area. The importance of the researcher being close to the phenomenon, in fact immersed in it (Carson, D. J., et al. 2001) as mentioned above, and provides a rare opportunity to study a revelatory case. 'This closeness constitutes the quality of the research process that gives the richness and meaning to outcomes' (Carson, et al. 2001: pp218). Thus, Yin's third rationale clearly justifies the choice of the single case study for this investigation. It may be appreciated; however, the study is not merely a single case, but one with the added richness of embedded Sub-cases- the subsidiary companies of

MTN Group selected for this study. Within each Sub-case, an in-depth analysis involved in-depth semi-structured interviews of senior and middle level management as detailed in Tables 3.5 & 3.6 below. Based on the arguments, the choice of a single case study for this investigation is justified.

3.6.4 Literal and theoretical replication

The logic underlying the use of multiple-case studies requires that each case is selected because it either predicts similar results- replication logic or produces contrasting results, but for predictable reasons-theoretical replication. Replication logic is analogous to that used in multiple experiments within the positivist paradigm (Yin, R.K. 2009). With multiple case study design, multiple embedded Sub-cases can be considered as multiple experiments. If similar results are obtained from all cases, replication is said to have taken place (Sobh, R., Perry, C. 2005). Multiple embedded Sub-cases provide this investigation with the robustness associated with multiple case design (Yin, R.K. 2009). Each individual Sub-case consists of a ‘whole’ study, in which convergent evidence is sought regarding the facts and conclusions for the Sub-case. Each Sub-case’s conclusions are then considered to be the information needing replication by other individual Sub-cases. The patterns that emerge across the Sub-cases build an aggregate picture of the phenomena being investigated in the MTN group. Research design for single case study with embedded Sub-cases for literal and theoretical replication is captured in the Tables 3.5 & 3.6. These two tables reflect the purposive sampling for this study and provide a summary of the structure of this single case study with multiple embedded Sub-cases.

Table 3.5: Research design for single case study with embedded Sub-cases for literal and theoretical replication: Executive Management

Sub- Case Company	Senior Executive	Total
X	SC(XA,XB,XC,XD,XE,XF,XG,XH,XI)	1 Sub-case consisting possible 9 interviews in the CASE X
Y	SC(YA,YB,YC,YD,YE,YF,YG,YH,YI)	1 Sub-case consisting possible 9 interviews in the CASE Y
Z	SC(ZA,ZB,ZC,ZD, ZE, ZF, ZG,ZH,ZI)	1 Sub-case consisting possible 9 interviews in the CASE Z

(Source: constructed for this study)

Where: SC= Sub-Case.

- 1) XA = Interview with the Chief Finance Officer
- 2) XB = Interview with the Chief Technical Officer
- 3) XC = Interview with the Chief Marketing Officer

- 4) XD = Interview with the Chief Human Resources Officer or General Manager Human Resources
- 5) XE = Interview with the General Manager Distribution & Sales
- 6) XF = Interview with the General Manager Regulatory & Corporate Affairs
- 7) XG = Interview with the General Manager Information Systems Officer
- 8) XH = Interview with the General Manager Capital Projects Management
- 9) XI = Interview with the General Manager Customer Relations

Table 3.6: Research design for single case study with embedded Sub-cases for literal and theoretical replication: Middle level management

Sub -Case Company	Middle level management	Total
X	SC(XA1,XB1,XC1,XD1,XE1,XF1,XG1,XH1,XI1)	1 Sub-case consisting possible 9 interviews in the CASE X
Y	SC(YA1,YB1,YC1,YD1,YE1,YF1,YG1,YH1,YI1)	1 Sub-case consisting possible 9 interviews in the CASE Y
Z	SC(ZA1,ZB1,ZC1,ZD1,ZE1, ZF1,ZG1,ZH1,ZI1)	1 Sub-case consisting possible 9 interviews in the CASE Z

(Source: constructed for this study)

Where: SC= Sub-Case.

- 1) XA1 = Interview with the Middle Level Managers in the Finance
- 2) XB1= Interview with the Middle Level Managers in the Technical
- 3) XC1= Interview with the Middle Level Managers in the Marketing
- 4) XD1= Interview with the Middle Level Managers in the Human Resources
- 5) XE1= Interview with the Middle Level Managers in the Distribution & Sales
- 6) XF1= Interview with the Middle Level Managers in the Regulatory & Corporate Affairs
- 7) XG1= Interview with the Middle Level Manager Information Systems
- 8) XH1= Interview with the Middle Level Manager Capital Projects Management
- 9) XI1= Interview with the Middle Level Manager Customer Relations

3.7 Research instruments for data collection procedures

Preparation for collection of data began with a meeting of the researcher with the senior management of the cases as indicated in Section 3.7.4. To enhance the support from the Sub-cases, the researcher obtained, for this study, letters of support from his employer- one of the Subsidiary companies, and also from one of the MTN Group Vice Presidents.

3.7.1 Pilot Study

Undertaking a pilot case study is strongly recommended (Yin, R.K. 2009:pp92) for qualitative research design as it tests that the design will answer the research problem and research questions. Additionally, it allows the interview protocol to be verified; and the data collection and reporting systems to be tested for their utility (Yin, R.K. 2009). A pilot study consisting of four interviews: two senior executives and two middle managers was

undertaken at company X at convenient locations. The pilot interviewees had more than five years of relevant experience in management positions.

The outcome was that there was no significant refinement required to be made to alter the pilot case study interview questionnaire design. Therefore, it formed the final case study protocol document. The pilot interviewees did not know that they were part of a pilot at the time of the interview, and were hence, included into the total count of the interviewees of the case company X.

3.7.2 Case study protocol

A case study protocol included an overview of the study (Appendix A), the field procedures followed, interview questions and a guide for the research report (Yin, R.K. 2009.pp79). Its development and use enhanced the reliability of multiple/Sub- case study design allowing the researcher to outline prior to data collection the procedures to be followed and data collection instruments to be used. Case study questions for this research (appendix A) were constituted by the research questions outlined in the Chapter Two, and summarized in the Table 3.7 below.

Table 3. 7: Summary of the research questions in the interview Protocol

Research Questions (RQ)		Interview probe questions in the Interview Protocol.
Research questions developed in Chapter 2		
RQ	1. What are senior executive and mid level management perceptions and understanding of an EWRM?	Questions C1 to C8 (Part C)
RQ	2. What are the potential motivators for the implementation of EWRM?	Question D1 (Part D)
RQ	3. What are the principal risks associated with introducing an EWRM and how may they be managed?	Questions E1 to E9 (Part E)
RQ	4. Describe any anticipated barriers to implementation of EWRM?	Questions F1 to F7 (Part F)
RQ	5. Would knowledge sharing and enhanced communication assist in overcoming the EWRM implementation barriers?	Questions G1 to G8 (Part G)
RQ	6. What strategies could be adopted to overcome the implementation barriers associated with EWRM?	Questions H1 to H7 (Part H)

Source: Developed by the author

3.7.3 Selection of Number of Cases

There is no agreement on how many cases should be included in a study. The decision regarding the number should be left to the individual researcher (Romano, C. 1989; Patton, M.Q. 1990). Gummesson, E. (2000) suggests that the researcher should stop adding cases when theoretical saturation is reached. However, other researchers (Hedges, A. 1985; Miles,

M. B., Huberman, A. M. 1994; Ellram, L. M. 1996) suggest that the maximum number of cases should not be over 12 to 15 because any number greater than 15 could generate too much information for the researcher to follow the possible local dynamics; and lower limit of two to four cases is seen as the minimum acceptable requirement (Eisenhardt, K. M. 1989). In this study, the researcher chose three embedded Sub-Cases as minimum for this single case study. They were chosen on the basis of subscriber-numbers criteria used in the MTN Group where Sub-Cases: X is small, Y is medium and Z is large. This is further highlighted in Sections 4.2.1 and 4.3 respectively.

3.7.4 Selection of Unit of Analysis and Number of Interviewees

This Sub-Section justifies the selection of business unit or function and the interviewees for the study. The researcher selected business units/functions or departments to ensure richness of data obtained for good analysis and construct validity. Yin, R.K (2009) argues that as a general guide, a business unit is a specific next business level lower than the overall company. The reason for this distinction is that each business unit acts as centre where each of the senior executive assisted by middle level management implements company decisions such as EWRM. In this study nine business units or functions were selected as specified in Tables 3.5 and 3.6 above.

From each of the business unit or function, two interviewees were planned: a senior executive and a middle level manager. They were selected because of their unique positions (Yin, R.K. 2009.pp91) within each case. They have ability to provide perspectives on the EWRM implementation barriers, in their respective operations. Senior management provides the tone from the top for the implementation of the EWRM, and it should be supported by the middle level management. The decision to include the two levels of management categories was guided by the desire to examine whether or not the experience, attitudes, understanding and perceptions of the middle level management contrasted with those of their more senior colleagues with respect to the implementation barriers. The views of the two categories were thought essential for this study. Details of the interviewees are given in Chapter Four Section 4.3.

3.7.5 Data collection

Data was collected by means of in-depth interviews (Yin, R.K.2009). Permission of interviewees to record the interview on tape was sought in every instance. It was essential to

guarantee anonymity to interviewees. To provide this, the name of the case company (case) was coded and referred the three cases by letters: X, Y, and Z respectively. Interviewees were assigned the letter for their case and this letter was indicating their status in the case. For example X = Case Company (case), while A /A1, B/B1, C/C1, D/D1, E/E1, F/F1, G/G1, H/H1, and I/I1 respectively, indicated the levels and positions of the interviewees in the case.

Where:

XA = Interview with the Chief Finance Officer
XB = Interview with the Chief Technical Officer
XC = Interview with the Chief Marketing Officer
XD = Interview with the Chief Human Resources Officer or General Manager Human Resources
XE = Interview with the General Manager Distribution & Sales
XF = Interview with the General Manager Regulatory & Corporate Affairs
XG = Interview with the General Manager Information Systems Officer
XH = Interview with the General Manager Capital Projects Management
XI = Interview with the General Manager Customer Relations
XA1 = Interview with the Middle Level Managers in the Finance
XB1= Interview with the Middle Level Managers in the Technical
XC1= Interview with the Middle Level Managers in the Marketing
XD1= Interview with the Middle Level Managers in the Human Resources
XE1= Interview with the Middle Level Managers in the Distribution & Sales
XF1= Interview with the Middle Level Managers in the Regulatory & Corporate Affairs
XG1= Interview with the Middle Manager Information Systems
XH1= Interview with the Middle Manager Capital Projects Management
XI1= Interview with the Middle Manager Customer Relations.

The identity codes will remain exclusively with the researcher. On the transcripts of each interview only the code names of interviewees appear, this allows others to review the raw data without fear of compromising confidentiality.

3.7.6 Descriptive statistics

Collected data was transformed into a form that was easy to understand and interpreted using a five point Likert scale with a score of 5 indicating highest rating, and a score of 1 indicating lowest rating (Zikmund, W.G., et al, 2010). The Likert scale is still popular in the opinion research. In terms of reliability, several researchers found that rating scales consisting of five categories begin to produce satisfactory reliability values (Preston C. C., Colman A. M. 2000; Weng, L. 2004) until a certain point is reached. A considerable amount of studies show that this point is reached when 7-point scales are used (Cicchetti D. V., Shoinralter D., Tyrer, P. J. 1985; Alwin D. F. 1992; Preston C. C., Colman A. M. 2000). However, taken together, these studies seem to indicate that scales with five to seven answering categories are preferable, as advocated by Krosnick J. A., Fabrigar L. R. (1997). In this study, 5-point Likert scale was considered appropriate by the researcher. The interviewees were asked to

rate the factors based on 5-point scale as described in Sub-Section 3.7.9; and results were set out in Appendices I, J and K. Graphical presentations were considered better suited than tables for identifying patterns in the data for this study.

3.7.7 Minimization of the researcher's bias upon the respondents' answers

There are usual criticisms and concerns arising from a researcher's bias upon the respondents' answers during the interviews and the impact this may have on the interpretation of the data (Stake, R.1995; Zikmund, W.G. 2000). For this research, use of multiple embedded sub-cases hopefully negated the effect of the potential bias (Roberts, A. et al. 2005:pp3/12-13). Another way of dealing with potential bias was using the practice of triangulation of data, as discussed in sub-section 3.7.8. A further way to negate the effect of the potential bias was by interviewing different senior and middle level managers who were from different functions in the subsidiary companies (X, Y & Z) of MTN group from three different countries (Saunders, M., et al. 2009:pp326-7). Further, the literature review, prior theory, pilot interviews and documentation, including careful selection of: number of cases, unit of analysis and number of interviews, case study protocol and intra-case analyzes, were all designed to build the researcher's knowledge and it minimized the potential for bias (Perry, C. 1996; Yin, R.K. 2009).

3.7.8 Triangulation

The concept of triangulation argues that researchers should employ more than one method or source of data in the study of a social phenomenon so that the findings may be cross-checked (Bryman, A., Bell, E. 2011:pp720). In critical realism, especially in research where the organizational and social reality is complex (Yin, R.K. 2009) there is a need for investigation of the different aspects and viewpoints of that one reality. Triangulation was achieved in this study by interviewing multiple managers (Roberts, A. et al. 2005:pp3/6) from the functions as described in sub-section 3.7.5 (the embedded sub-cases) and compared interview results with publicly available documents on the company websites (see Appendix M). Triangulation was achieved by collecting data from the sub-cases (X, Y & Z) using semi-structured in-depth interviews (See Appendix A, and the Appendices D-H for selected comment outcomes), and cross-checked the information with the web-based documents (Appendix M). Multiple sources of evidence enhanced the validity of the data analysis (Patton, M.Q. 1990; Yin, R.K. 2009). In addition, the candidate interviewed other independent senior staff not included in the sample, researched international publications by

International Telecommunications Union (ITU) and the annual reports from the Regulatory Authorities of the respective countries (names withheld) of where the cases are operating. These secondary reports helped to triangulate the data collected from the primary source.

3.7.9 Interviews phase

Individual interviews began with an explanation of the objectives of the study (Yin, R.K. 2009). The interviews were semi-structured with individuals invited (Wengraf, T. 2001) to tell their experience of risk management with respect to EWRM approach in their case company. As a preamble, it was explained to each interviewee of terms specific to risk as sometimes those terms may be used interchangeably. They were defined so that all the interviewees understood them in the same way in Appendix L. In keeping with the semi-structured nature of the interviews, the preference was to allow individuals to tell their experiences without interruption in the hope that as many research questions as possible would be covered, without probing from the investigator. Probe questions from the interview protocol were used. Likert-scale assessment framework was used to summarize the overall perceptions (Carson, D. J., et al. 2001:pp101) against each of the specific research questions.

3.8 Data analysis procedures

Rigor is provided in case study research by its foundation on a review of relevant literature, careful selection of cases, and by careful analysis of data to build a new theory about complex issues (Perry, C. 1998). Gaps from the literature were expressed in the form of open research questions. These questions were used as headings in Chapters Four and Five. The quality of the cases selected, the validity, meaningfulness and insights generated from qualitative inquiry, depended on the analytical capabilities of the researcher (Carson, D. J., et al. 2001:pp106). To ensure high quality analysis, four principles guided the analysis of the data in Chapter Four (Yin, R.K. 2009:pp160) namely:

- a) Illustration that the analysis relied on all relevant evidence,
- b) Inclusion of all major rival interpretations,
- c) Identification and discussion of the most significant aspect of the study,
- d) Use of the researcher's prior expert knowledge to further the data.

Given the nature of the data collected and the level of development of prior theory, a descriptive framework was developed to present and analyze the data, thereby allowing the data to be put together with descriptions, explanations, analysis and commentaries (Chenail,

R. 1995). As stated earlier, the unit of analysis was sub-case-company as presented in Chapter Four. Each unit was analyzed first, beginning with a brief profile of the company. Data relating to each of the research questions was analyzed in terms of in- case and intra-case in graphical presentations. In Chapter Five, explanations and reasons for the main findings was advanced, and proposed directions for future research.

3.9 Limitations of case study research

This study is that of a single case with multiple-embedded Sub-cases, scientific generalization is not possible. While scientific generalization is not the aim of the study, its absence points to a limitation in that what is discovered about this one firm may not be generalized to all firms (Noor, K. B. M. 2008). In this sense, the study does not provide a test of theory. Theory testing will be a further development of the findings of this research (Yin, R.K. 2009). Case study research has frequently been accused of subjectivism or risk of bias (Perry, C. 1998; Rowley, J. 2002; Noor, K. B. M. 2008; Yin, R.K. 2009; Vissak, T. 2010). However, the origin of this criticism could be traced to the dominance of the positivist paradigm with its own illusion of objectivity (Yin, R.K. 2009; Vissak, T. 2010; Bryman, A., Bell, E 2011). Issues of reliability, validity and transparency are addressed in the methodology itself (Gummesson, E. 2000; Carson, D. J., et al. 2001; Yin, R.K. 2009) very comprehensively in Section 3.4. Based on the methodology as described; the criteria for trustworthiness, including the dimensions of credibility, dependability and conformability are met for purposes of this study.

3.10 Ethical considerations

Carson, D. J., et al. (2001) and Zikmund, W.G., et al. (2010) summarize ethical considerations to include the right of interviewees to confidentiality, anonymity, privacy, and informed consent. The investigator ensured the security of data, the protection of the identity of all interviewees and the maintenance of confidentiality and security of information, as described in Section 3.7.3. Interviewees were assured of anonymity and privacy by means of the coding represented in tables 3.6 & 3.7 respectively. Permission of each interviewee and associated recording was sought. Safe keeping and the location of tapes and transcripts were explained. The fact that there was only one investigator simplified the task of security of data. Tape recordings are retained by the investigator and transcripts are kept in a safe place.

3.11 Conclusion

This chapter has presented a justification of the scientific realism paradigm for this study and justified case study method as providing rigorous scientific inquiry for a qualitative investigation. Tests of quality criteria for a one case study with embedded Sub-cases have been justified. The role of prior theory in case study was explored and justified. Procedures for data collection and analysis were explained. The chapter concluded by outlining limitations of the case study research and how ethical considerations are dealt with. From these foundations, the next Chapter Four presents the analysis and findings from the data collected.

CHAPTER 4 - DATA ANALYSIS

4.1 Introduction

Chapter Three described the research paradigm and the case study method, as well as the method for data collection and analysis. The purpose of this Chapter is to present and analyze the findings from the data that relate it to the six research questions presented in Chapter Two. Key findings, themes and patterns in the data are presented through cases and intra - case analyzes for each of the research questions. Chapter Five will discuss these findings in relation to the literature review and their implications for theory, practice and further research. The chapter is structured as follows: Section 4.2 profiles the unit of analysis for this research as the MTN Group, the telecommunications group operating in Africa, Asia and Middle East. The researcher focused on three cases (the embedded Sub-cases—operating companies) from its Africa operations for this study. Section 4.3 profiles the interviewees from the three Sub-cases. Section 4.4 refers to data analysis of research questions from numbers 1–6 as given in table 4.1. Section 4.5 comprises the conclusions and provides a summary of the main findings for each research question and final the conclusion.

Table 4. 1: Research Problem and Research Questions

Research Problem:
What are the Implementation Barriers to the Introduction of Enterprise-Wide Risk Management (EWRM) In an African Telecommunications Enterprise?
Research Questions (RQ):
RQ.1 What are senior executive and mid-level management perceptions and understanding of an EWRM system?
RQ.2 What are the potential motivators for the implementation of EWRM?
RQ.3 What are the principal risks associated with introducing an EWRM and how may they be managed?
RQ.4 Describe any anticipated barriers to implementation of EWRM.
RQ.5 Would knowledge sharing and enhanced communication assist in overcoming the barriers?
RQ.6 What strategies could be adopted to overcome the implementation barriers associated with EWRM?

Source: Developed by the author

4.2 Profile of MTN Group and its embedded Sub-cases (Operating Companies -Case's)

This Section presents the background to the MTN group, and the three Operating companies (Case's) used in the study. MTN Group was launched in 1994, a multinational telecommunications group with 21 operating companies of which 16 are in Africa, 5 are in Asia & Middle East (www.mtn.com). MTN Group is listed on the Johannesburg Securities Exchange in South Africa. As indicated in the Appendix B; MTN recorded 170,573,000 Subscribers across its operations, March 31, 2012. (Appendix M: MTN Group Immediate Release May 4, 2012).

4.2.1 Profile for the embedded Sub-cases X, Y & Z.

From the MTN Operations in Africa, the researcher selected three Cases (the embedded Sub-cases— X, Y & Z) for this study as justified in the Sub-Section 3.7.3. MTN Group's first category is the small operations which have less than 5 million Subscribers; the second, medium have more than 5 million but less than 15 million Subscribers; the third, large have more than 15 million Subscribers. Each Sub-case selected represented similar operating companies of the same size across the MTN operations in Africa. To preserve confidentiality, each Sub-case has been given a code: X, Y & Z respectively. The confidentiality of these Sub-cases is further enhanced by removing both country and Subscriber profiles in Appendix B. All Sub-cases, offer the products indicated in the Section 4.2.2.

Sub-Case X: has been operating for more than 10 years. End of year 2011, it held the number one position in the country's market with a market share of 71%.

Sub-Case Y: has been operating for more than 10 years. End of year 2011, it held the number one position in the country's market with a market share of 54%.

Sub-Case Z: has been operating for more than 10 years. End of year 2011, it held the number two position in the country's market with a market share of 34%.

4.2.2 The Core of MTN Offerings Include:

Voice services via second and third generation networks, including prepaid and postpaid airtime based on various price plans, international roaming, electronic voucher distribution services and community payphones. Mobile and fixed data products, including short message service (SMS), multimedia message services (MMS), internet access via various

technologies, MTN Mobile Money, content portal MTN Play, and corporate data services. As smart phones become more accessible, demand for internet services is growing and so MTN is strengthened. (Appendix M: MTN Group Integrated Business Report 2011).

4.3 Profile of the interviewees—from the three Sub-Cases.

This Section provides background information on interviewees. They have at least five years-working experience. Their full primary source data -profile details are in Appendix C. The selection of the interviewees was justified in the Chapter Three Sub-Section 3.7.4. A total of 32 interviewees responded, 17 were senior executives, and 15 were middle-level managers, respectively. From the Sub-Case X; the researcher interviewed 5 senior and 8 middle; in the Sub-Case Y, 6 senior and 4 middle; Sub-Case Z, 6 senior and 3 middle. These interviews were conducted face to face, and semi-structured. The interviewees were a target sample based on typical of the MTN group operating company categories mentioned in Chapter Three Sub-Section 3.7.3 above and were substantial enough to be indicative of general views of single case study with multiple embedded Sub-cases.

4.4 Data Analysis of Research Questions 1–6.

This is the most substantial section which presents and discusses the findings for each research question and summarizes themes and their significance in relation to the EWRM framework, as discussed in literature review in Chapter Two. In chapter Three, Sub-Section 3.3.2; it is stated that findings of the qualitative research are not arrived at by statistical procedures (Guba, E.G., Lincoln, Y.S. 1994). Since this study is qualitative, it has not undertaken a statistical procedure in the data analysis. The research is about how people in the organization perceive, understand and experience the implementation barriers associated with EWRM. It is about organizational functioning, social movements, cultural phenomena and interactions between social factors (Creswell, J., W. 2007; Cooper, D.R., Schindler, P.S. 2008). The data collected is mainly concerned with the real views/opinions of people: what they say and do (Bryman, A., Bell, E. 2011). Interviewees' views are represented as accurately as possible (Quinlan, C. 2011).

4.4.1 Research Question 1: What are senior executive and mid-level management perceptions and understanding of an EWRM?

EWRM framework, Chapter Two: Sub- Section 2.3.3; considers risks and activities at all levels of the organization. This holistic approach aims at actively involving all people in the organization. However, people come from different functions in the organization and may perceive risk differently (Riabacke, I. 2006; Helliard, V.C; et al. 2001). Thus it is important to appreciate this situation in the process of the implementation of EWRM in the organization as highlighted in Chapter Two, Section 2.2. This is further underpinned in Sub-Section 2.5.1. The focus of the research question 1; was to find out what were the perceptions and understanding of EWRM system by the senior executives and whether they held same perception and understanding as their mid-level management as this would have implications for EWRM implementation. The probe questions were taken from Appendix A (Part C) of the interview protocol. Responses to the questions (C1& C4, C2 & C5, C3&C6, C7, C8) were used for the purposes of analysis. In considering all the data from the 32 interviews reported in Appendix D, the researcher analyzed Sub-cases in order to establish themes and patterns for the Research Question 1.

4.4.1.1 Case Analysis: Sub-Case X: Research Question 1.

Senior executives and middle-level management were interviewed based on the probe questions and the responses are detailed in the Appendix D. Important comments which were demonstrated in the responses with respect to perceptions and understanding of an EWRM system are briefly highlighted below:

- Perceptions and understanding of enterprise -wide risk management (C1& C4): “it is looking at all risks across the organization as this can help to avoid catastrophic events; it is a global overview of risks in the company, and with the technological changes, EWRM system becomes very important”.
- Importance of enterprise -wide risk management in your CASE (C2 & C5): “You can’t run business without assessing risks, it is very important in the competitive environment; it can help in addressing issues of fraud”.
- My role in the implementation of EWRM (C3&C6): “my role is key, because controls have to start from top and be cascaded down; and to sensitize junior staff on the risk

management; ensure implementation of risk mitigations, where everyone should have a hand in it, and I included”.

- All the managers in your CASE should take responsibility for the drive of the enterprise – wide risk management (C7): “because risk attaches to all business units, therefore it needs to be considered by all levels; and yes, all managers should be responsible; because all tasks are interlinked in the company”.
- **Significant observations.** Taking overall responsibilities for the implementation of the EWRM in the CASE (C8); un-certainties were observed: interviewees both at the senior executive and middle-level management were not certain as to who should take full responsibility for implementation. Some of the respondents thought it was responsibility of the head of business risk management. Others thought it should be the CEO.

4.4.1.2 Case Analysis: Sub- Case Y: Research Question 1.

Senior executives and middle-level management were interviewed based on the probe questions, the responses are detailed in the Appendix D. Important comments which were demonstrated in the responses with respect to EWRM perceptions and understandings are briefly highlighted below:

- Importance of enterprise -wide risk management in your CASE (C2 & C5): “very important as it would optimize the shareholder value, and also fix the revenue leakage”.
- My role-play in the implementation of (C3&C6): “I define risk areas, and see the buy-in of the risks identified and implement them in the department”.
- All the managers in your CASE should take responsibility for the drive of the enterprise – wide risk management (C7): “Yes, all should take responsibility but within their portfolios; all are responsible because risks can be in chain, one leakage in one department can affect the entire company”.
- **Significant observations.** On the probe question ‘Perceptions and understanding of EWRM (C1& C4)’: some of the interviewees at senior executive level stated that EWRM was thought to be part of internal audit; thus created confusion between internal audit and risk management. Also, un-certainties were observed in C8, where the interviewees were not certain as to who should take full responsibility for

implementation. Some of the respondents said that it was responsibility of the head of business risk management; or the CEO; others further stated that it was responsibility of the senior managers.

4.4.1.3 Case Analysis: Sub- Case Z: Research Question 1.

Senior executives and middle-level management were interviewed based on the probe questions, responses are detailed in the Appendix D. Important comments which were demonstrated in the responses are briefly highlighted below:

- Perceptions and understanding of enterprise -wide risk management (**C1& C4**): “it is essential to have EWRM, as all aspects of business are affected by risks; my perception of EWRM is how risks would affect value chain in the company. It cuts across all functions”.
- Importance of EWRM in your CASE (**C2 & C5**): “very important, as it can be used to mitigate any risks in future, highly important to have in the company”.
- My role in the implementation of (**C3&C6**): “my role is to identify potential risks, and implement management controls over them. I do drive the process. This means it runs from CEO down to everybody in the Case”.
- All the managers in your CASE should take responsibility for the drive of the EWRM (**C7**): “all managers should take full responsibility, as this is a part of corporate governance for implementation of EWRM, so that it is applied across the whole company”.
- **Significant observations.** Considering overall responsibility for the implementation of the EWRM in the CASE (**C8**): un-certainties were observed in **C8**, interviewees both at the senior executive and middle-level management were once again not certain as to overall implementation responsibilities. Middle-level management respondents stated that: “All managers should be responsible, however, overall responsible should be the head of the risk management in the company, as he/she will have overall view of the risks in the company”.

4.4.1.4. Summary of the findings on Research Question 1.

Findings derived from the responses from the interviews indicated that most of the senior executives and the middle level management of both genders, understood the essence of EWRM system, and perceived it as necessary; it should cut across all functions in the organization. They indicated they had a key role in its implementation (Appendix M: MTN Group Limited: Integrated Business Report 2011: Pp 55-57). Despite the understanding and perceptions observed; a few senior executives stated that EWRM was confusing between internal audit and risk management. In terms of overall responsibility for EWRM implementation; un-certainties were also observed across all three cases, where the interviewees, were not certain as to who should take overall full responsibility. Given the far-reaching consequences that could arise if no one was to take overall responsibility for the implementation, this observation will be explored further in Chapter Five.

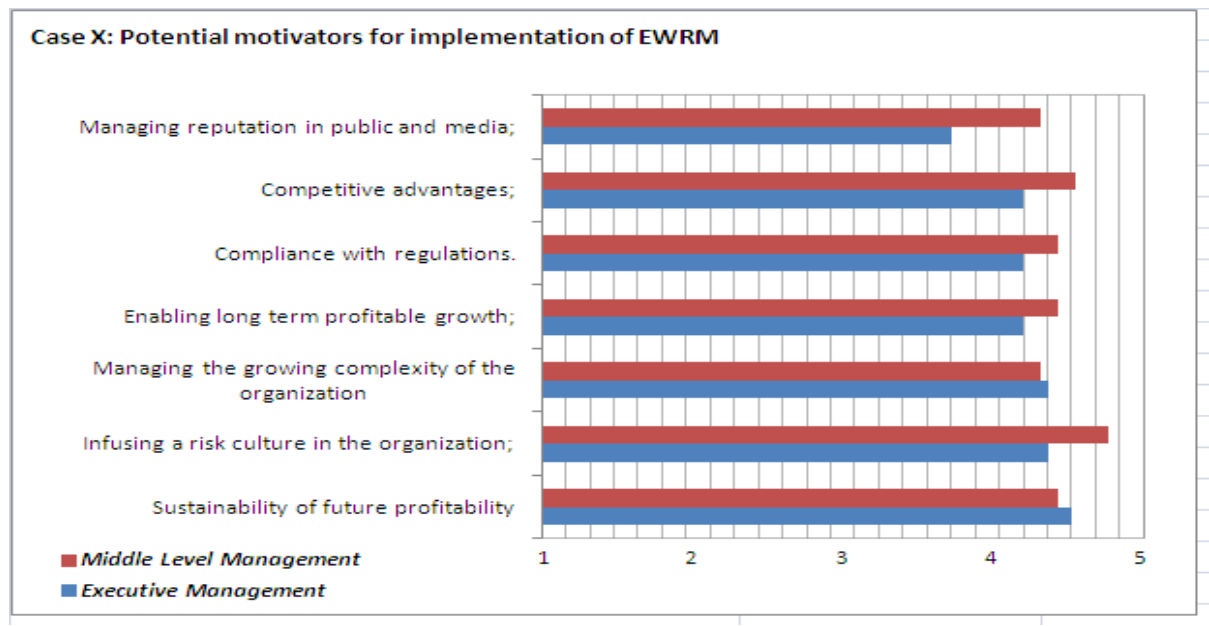
4.4.2 Research Question 2: What are the potential motivators for the implementation of EWRM?

In Chapter Two, Sub- Section 2.3.2; highlighted some forces towards EWRM, which arose from the emergence of a rapidly changing market environment, compliance requirements, and new business models (Tillinghast – Towers Perrin. 2000; Vagneur, K. 2004: pp2/2-6). These forces gave rise to the factors being tested in this research question. The focus of the research question 2 was to find out what were the potential motivating factors for the senior executives and their mid-level management to implement EWRM. The interviewees were asked to rate the factors based on 5-point Likert scale as indicated in Chapter Three, Sub-Section 3.7.6. The average or mean value of the Likert rating scale is popular usage indicator for measuring a factor's importance. The higher the mean value, the more important the factor was perceived in this research question. Arranging the factors in descending order as set out in Appendix I gave an indication of the most perceived potential motivators for implementation. Interviewees rated the factors on scale of: **1_2_3_4_5** with **1** being lowest and **5** the highest as given in Appendix A (Part D) of the interview protocol. In considering all the data from the 32 interviews, the researcher analyzed Sub-cases in order to establish themes and patterns for the Research Question 2.

4.4.2.1 Case Analysis: Sub-case X: Research Question 2.

Interviewees were asked to rate the potential motivating factors as given in Appendix A (Part D) of the interview protocol whose results are detailed in Appendix I (Table I-1 & 2) from which Figure 4.1 was extracted. Overall, it was the middle-level management who rated these “motivating factors” higher than the senior executive management with exception of “sustainability of future profits”- where the senior executives rated it slightly higher than the middle-level management at 4.4 compared to 4.29 out of 5 respectively. Middle-level management perceived the factor of “infusing a risk culture in the organization” as the greatest motivator for implementation at a rate of 4.7 out of 5. Further explanations and comments on the levels of variance (data spread measurements) in the responses for the Executives and Middle Level Management are presented in the Table 4.2 below.

Figure 4. 1: Graphical Comparison of perceptions of Executive & Middle Level Management over the Potential motivators for Implementation of EWRM



Source: developed by the Author

From the Table 4.2 below extracted from the Appendix N (Table N-1 & 2) presented the mean score, variance and the standard deviation for the two levels of management in the Case X. It was noted the mean score of the Middle level Management (MLM) was higher than one of the Executive management (EXM) and the variance and standard deviation of MLM respectively were lower than for the EXM. This showed that MLM demonstrated less variance and the standard deviation from the mean and the individual scores respectively

compared to the EXM. This situation would seem to imply that MLM were more in agreement than EXM that they would be motivated by the data sets of potential motivators to implement EWRM. The researcher made inquiry to find explanation for the divergent perception and found that Case X was facing a very high competitive pressure from the new entrants in the market where it had been the only incumbent for many years, and this seemed to have influenced the MLM much more than EXM to think of the motivators to implement EWRM.

Table 4. 2. Case X: Mean Score , Variance and Standard Deviation

Case X: Potential motivators for implementation of EWRM	Executive Management	Middle Level Management
The Mean Score	4.03	4.33
Variance	0.59	0.23
Standard Deviation	0.768	0.479

Source: Developed by the Author

4.4.2.2 Case Analysis: Sub-case Y: Research Question 2.

Interviewees were asked to rate the potential motivators as given in Appendix A (Part D) of the interview protocol, results are presented in Appendix I (Table I-3 &4) from which Figure 4.2 was extracted.

Comparatively, middle-level management perceived the following as ‘motivating factors’, rating them higher than the senior executives:

- Infusing a risk culture in the organization,
- Sustainability of future profitability,
- Managing reputation in public and media.

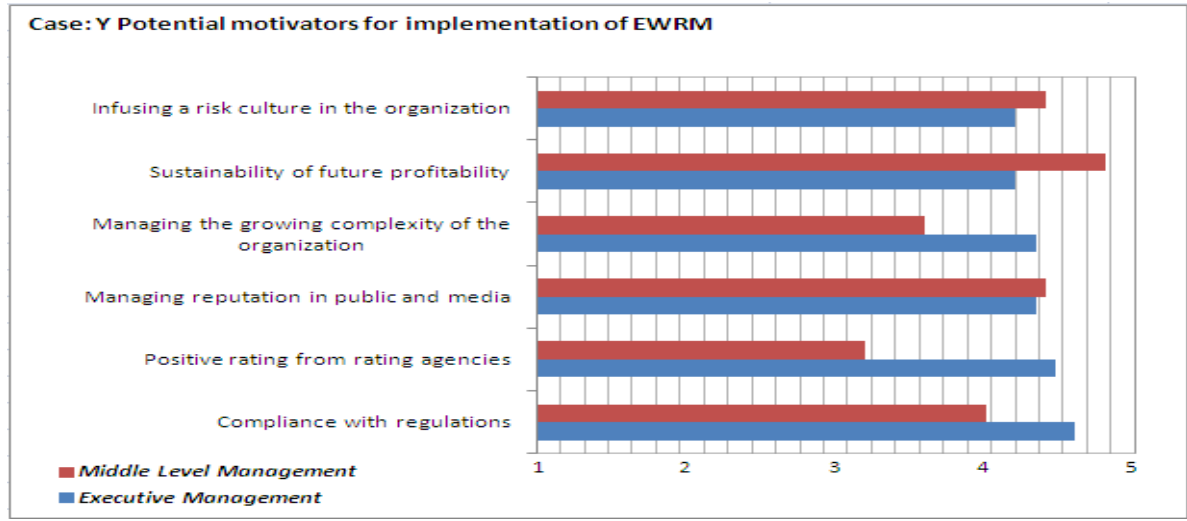
From the perspectives of the senior executives, they perceived the following ‘motivating factors’ as greatest:

- Compliance with regulations
- Positive rating from rating agencies
- Managing the growing complexity of the organization.

According to the middle level management point of view, “sustainability of future profits” was most motivating factor for implementation rated at 4.75 out of 5, whereas the senior executives perceived the “compliance with regulation” at a rate of 4.5 out of 5 as the greatest. Further explanations and comments on the levels of variance (data spread measurements) in

the responses for the Executives and Middle Level Management are presented in the Table 4.3 below.

Figure 4. 2: Graphical Comparison of perceptions of Executive & Middle Level Management over the Potential motivators for Implementation of EWRM



Source: developed by the Author

From the Table 4.3 below, extracted from the Appendix N (Table N-3 & 4) presented the mean score, variance and the standard deviation for the two levels of management in the Case Y. It was noted the mean score of the Executive Management (EXM) was higher than one of the Middle level Management (MLM) and the variance and standard deviation of EXM respectively were lower than for the MLM. This showed that EXM demonstrated less variance and the standard deviation from the mean and the individual scores respectively compared to the MLM. This situation would seem to imply that EXM were more in agreement than MLM that they would be motivated by the data sets of potential motivators to implement EWRM. The researcher made inquiry to find explanation for the divergence in perception and found that Case Y had recently been penalized by the telecommunications regulator for non-compliance with one of the regulations, and this seemed to have influenced the EXM much more than MLM to consider the motivators to implement EWRM.

Table 4. 3. Case Y: Mean Score, Variance and Standard Deviation

Case Y: Potential motivators for implementation of EWRM	Executive Management	Middle Level Management
The Mean Score	4.20	3.83
Variance	0.19	2.71
Standard Deviation	0.435	1.646

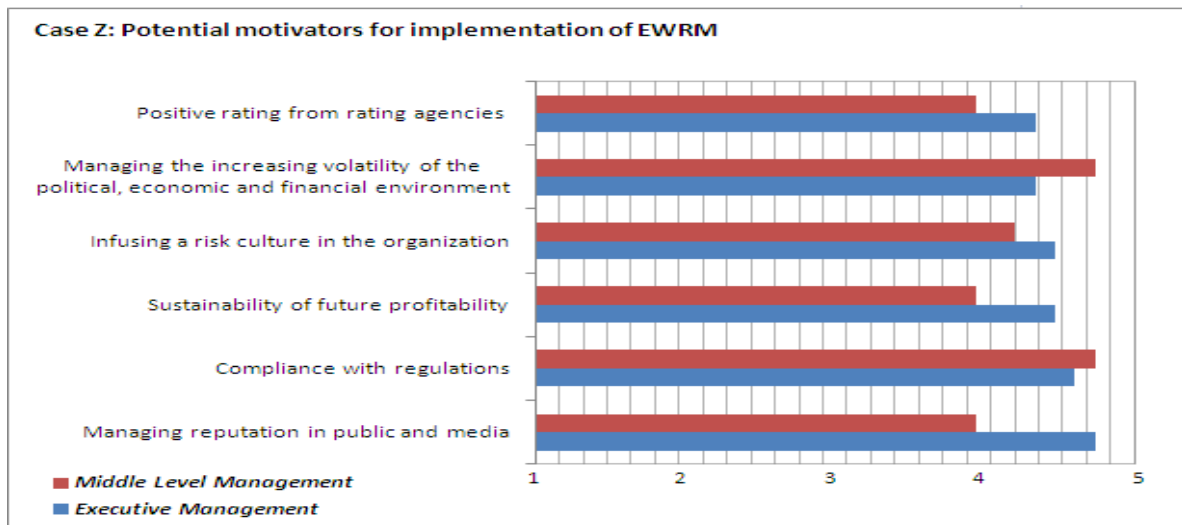
Source: Developed by the Author

4.4.2.3 Case Analysis: Sub-case Z: Research Question 2.

Interviewees were asked to rate the potential motivators as given in Appendix A (Part D) of the interview protocol whose results are detailed in Appendix I (Table I-5&6) from which Figure 4.3 below was extracted.

Middle-level management perceived compliance with regulations and managing the increasing volatility of the political, economic and financial environment respectively, as most ‘motivating factors’ for implementation and rated both of them at 4.67 out of 5 each. However, senior executives, perceived managing reputation in public and media as most ‘motivating factor’ for implementation and rated it at 4.67 out of 5. The remaining factors were rated higher by senior executives than middle-level management from ranges of 4.17 to 4.5, and 3.67 to 4 out of 5, respectively. Further explanations and comments on the levels of variance (data spread measurements) in the responses for the Executives and Middle Level Management are presented in the Table 4.4 below.

Figure 4. 3: Graphical Comparison of perceptions of Executive & Middle Level Management over the Potential motivators for Implementation of EWRM



Source: developed by the Author

From the Table 4.4 below, extracted from the Appendix N (Table N-5 & 6) presented the mean score, variance and the standard deviation for the two levels of management in the Case Z. It was noted the mean score of the Executive Management (EXM) was higher than one of the Middle level Management (MLM) and the variance and standard deviation of EXM respectively were lower than for the MLM. This showed that EXM demonstrated less variance and the standard deviation from the mean and the individual scores respectively

compared to the MLM. This situation would seem to imply that EXM were more in agreement than MLM that they would be motivated by the data sets of potential motivators to implement EWRM. The researcher made inquiry to find explanation for the divergence in perception and found that Case Z had recently received a negative publicity from the media, and this impacted on its share price on the stock exchange and this seemed to have influenced the EXM much more than MLM to consider the motivators to implement EWRM.

Table 4. 4. Case Z: Mean Score, Variance and Standard Deviation

Case Z: Potential motivators for implementation of EWRM	Executive Management	Middle Level Management
The Mean Score	3.74	3.48
Variance	2.52	3.22
Standard Deviation	1.587	1.794

Source: Developed by the Author

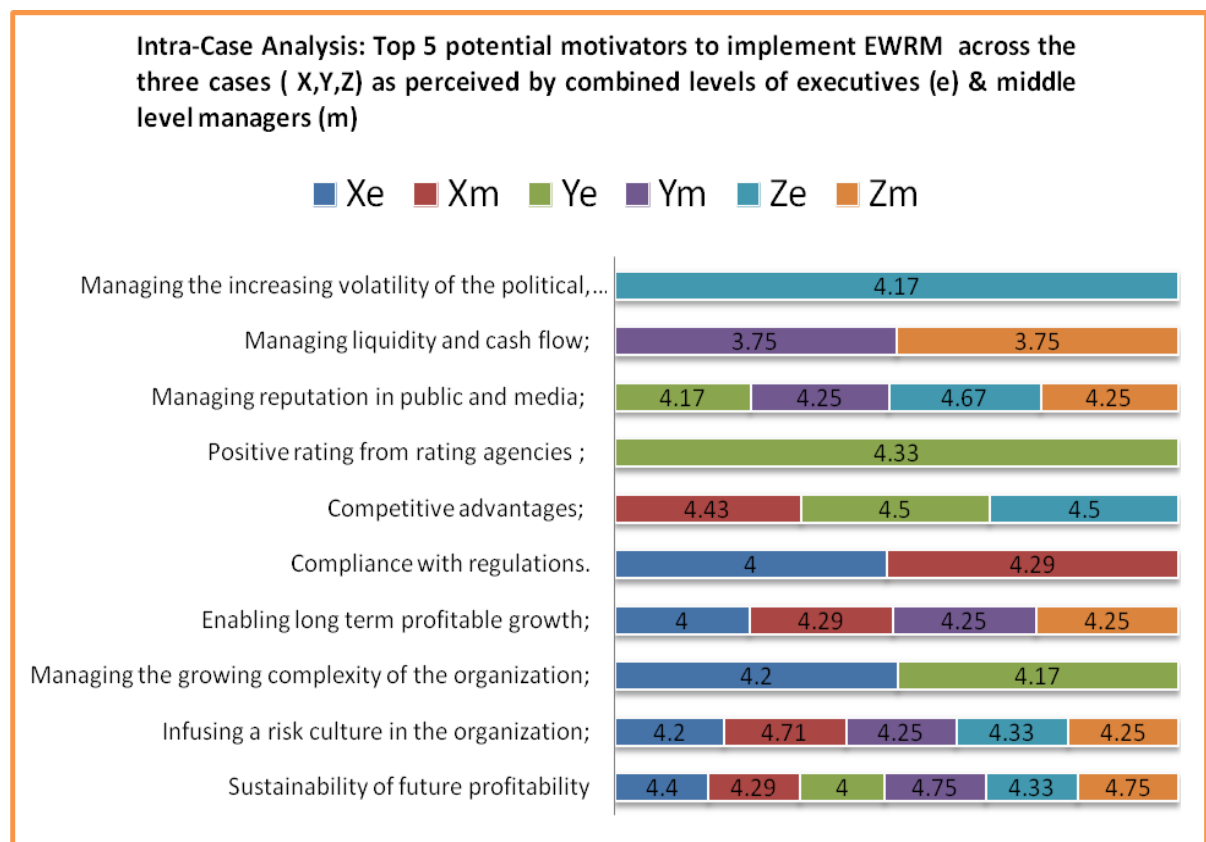
4.4.2.4 Intra Cases Analysis Research Question 2

The Intra case analysis set out to find out what were the most common motivating factors across the three cases (X,Y & Z) for the senior executives and the middle-level management. The interviewees were asked to rate the potential motivators as given in Appendix A (Part D) of the interview protocol for which results are detailed in Appendix I (TableI-1 to 6). Figure 4.4 below, presents top five potential motivator factors across the three cases (X,Y & Z):

- Sustainability of future profitability was perceived as most common motivating factor for implementation of EWRM across all the three cases by all senior executives and middle-level management respectively. They rated this factor from a range of 4 to 4.7 out of 5.
- Infusing a risk culture in the organization was perceived the next most common motivating factor for implementation of EWRM across all the three cases by all senior executives and middle-level management except the senior executives in the case Y. Those who perceived it as a common motivating factor rated it from a range of 4.2 to 4.71 out of 5.
- Enabling long term profitable growth was perceived the next most common motivating factor for implementation of EWRM across all the three cases by all senior executives and middle-level management except the senior executives in the cases Y and Z. Those who perceived it as common motivating factor rated it from a range of 4 to 4.29 out of 5

- Managing reputation in public and media was perceived the next most common motivating factor for implementation of EWRM across two cases Y & Z by all senior executives and middle-level management. Those who perceived it as next most common rated this factor from a range of 4 to 4.29 out of 5.

Figure 4. 4: Intra-cases Analysis; Top five potential motivators to implement EWRM across the three cases (X,Y,Z) as perceived by the combined levels of Executives (e) & Middle level Management (m)



Source: developed by the author

4.4.2.5. Summary of the findings on Research Question 2.

Findings from the interviewees are set out in Appendix I (Table I-1 to 6) as well as in Figure 4.4; show that the most common motivating factor across the three cases was the “Sustainability of future profitability”. The second was the “infusing a risk culture in the organization”, with the exception of the senior executives in the case Y; who perceived the “compliance with regulation” as the second most motivating factor. This was further triangulated in the MTN Group Integrated Business Report 2011: Pp 55-57 (Appendix M), where risk management perspectives are considered. This research question has brought to light that interviewees in the three Sub-cases seemed to perceive “Sustainability of future profitability” as the greatest motivator for EWRM implementation. From the practice

perspective, this perception could be attributed to employee rewards based on short and long-term incentives, such as the performance system of bonus payment based on profitability as one of the key performance areas for the senior executives and middle level management respectively. This was further triangulated in the MTN Group Integrated Business Report 2011-Pp 60-62 (Appendix M). Additionally, the maturity of the cases- more than 10 years in operation: profitability performance of each case is critically reviewed by the board of directors.

4.4.3 Research Question 3: What are the principal risks associated with introducing an EWRM and how may they be managed?

From the literature review in Chapter Two, Sub Sections 2.3.2 & 2.5.1.2; corporate failures can be caused by different forces including inefficient risk management practices (Manab, A.N; et al. 2010). Deloitte (2004) survey found that most of the firms analyzed their risks but the focus lied on financial risks. Most of the companies with EWRM placed its use solely for complying with regulatory requirements and failed to identify other principal risks that could have company-wide impact. It was from this perspective of understanding of the EWRM by business managers, that research question 3 set out to test how senior executives and their mid-level management perceived and understood what the principal risks were for their respective cases. These risks have the implications for EWRM implementation.

The focus of the research question 3; was to find out how the interviewees perceived what the principal risks were for their respective case companies. This research question has two parts: **(a)** for the rating the principal risks, and **(b)** the interview responses to the probe questions (**E1, E3, E4, E5, E6, E7, E8, and E9**). The interviewees were asked to rate those principal risks they perceived as having company-wide impact on basis of 5-point Likert scale: **1_2_3_4_5**; as given in Appendix A (Part E) of the interview protocol. In considering all the data from the 32 interviews, the researcher analyzed Sub-cases in terms of “case and intra- cases” analyzes in order to establish themes and patterns for the Research Question 3.

4.4.3.1 Case Analysis: Sub-Case X: Research Question 3.

(a) Rating the Principal Risks.

Interviewees were asked to rate the principal risks they perceived as having company-wide impact as given in Appendix A (Part E), of the interview protocol. Results are presented in

Appendix J (Table J-1&2); from which the graphical presentation in Figure 4.5 was extracted. Figure 4.5 compares the perception between the senior executives and the middle level management. Comparatively, senior executives perceived the list below as “principal risks they thought as- would have a company-wide impact” and rated them higher than the middle-level management:

- Inability to design and implement strategy appropriately
- Revenue Leakage
- Compromised Information Security and Customer Privacy
- Customer centricity not meeting the expectations of the customer and not embedded in the company
- Negative impact on the company as a result of adverse regulatory changes or non compliance with the laws and regulations
- Potential threats to continuity of operations as a result of political, environmental and macro-economic events
- Inability to create and maintain a competitive advantage
- Network performance not meeting customer demand.

Middle-level management, perceived the following principal risks as would have most company-wide impact:

- Compromised Information Security and Customer Privacy
- Inability to recover from catastrophic events.
- Network performance not meeting customer demand

From the senior executives and middle level management point of views, “Compromised Information Security and Customer Privacy” was a principal risk they thought would have most company-wide impact to the Sub-case, and rated it at 5 out 5 and 4.7 out of 5, respectively.

Figure 4. 5: Graphical presentation of perceptions of Executive & Middle Level Management over the Principal Risks that may have Company-Wide Impact in Sub-Case X



Source: developed by the author

(b) Interviews on probe questions Research Question 3

Senior executives and middle-level management were interviewed based on the probe questions (E1, E3, E4, E5, E6, E7, E8, E9); selected responses are captured in the Appendix E. Important comments which were demonstrated in the responses are briefly highlighted below:

- Perception of what the principal risks are for your CASE (E1): “Risks are related to technological changes & skills gaps, regulatory, systems security; a principal risk would be one that would make loss of business due to network failure e.g. where switch is destroyed”
- Why consider these risks to be principal for your CASE? (E3): “They can affect the company’s short & long-term objectives; these risks can affect the company adversely, they work against the continuity of business and have great impact to the company”.
- Why manage the principal risks in the CASE anyway? (E4): “We have to manage and mitigate risks so as to sustain the business; its management will enable future profitability and grow business; and for the continuity of the business”
- The position of the board of directors in the management of the principal risks & their role (E6): “Board is responsible for the affairs of the company, accountable to the

- shareholders, and so they should get to manage the principal risks; board approves resources to mitigate the principal risks”
- Position of CEO in the management of the principal risks (**E7**): “CEO should be accountable and endorse these principal risks, and should see that the management team implements risk management”
 - My role in the management of the principal risks for your CASE (**E8**): “Ensure risks awareness and enshrine them in the daily activities; and facilitate their identification and implementing mitigating controls”.
 - Position of the officer in charge of business risk management (BRM) in your CASE in relation to the management of the principal risks (**E9**): “BRM role is the campaigner of these risks and a custodian; BRM role is that of liaison office for risks, and how they are managed; BRM’ role is coordinating management of the risks and reporting; BRM to highlight risks in the company to the management & the Board and the mitigating controls put in place”
 - **Significant observations.** Consideration of who should take the responsibility for the management of the principal risks in the CASE (**E5**): The interviewees both at the senior executive and middle-level management were not certain as to who should take the responsibility for the management of the principal risks in the CASE. Some of the respondents said that it was the responsibility of the head of business risk management (BRM), because the BRM team has experience, exposure and know- how in respect of the risks, and also because the head supports management and the board.

4.4.3.2 Case Analysis: Sub-Case Y: Research Question 3.

(a) Rating the Principal Risks.

Senior executives and middle-level management were asked to rate the principal risks they perceived as having company-wide impact as given in Appendix A (Part E) of the interview protocol; results are presented in Appendix J (Table J-3&4) from which the graphical presentation in Figure 4.6 was extracted. Figure 4.6 compares the perceptions of the senior executives and the middle level management.

Comparatively, senior executives perceived the listed below as “principal risks they thought as- would have a company-wide impact” rated them higher than the middle-level management:

- Ineffective Sales and Distribution
- Compromised Information Security and Customer Privacy
- Inability to recruit, develop and retain appropriate skills
- Revenue Leakage.

Middle-level management, perceived the following principal risks as would have most company-wide impact:

- Inability to recover from catastrophic events
- Ineffective use and management of IT resources
- Negative impact on the company as a result of adverse regulatory changes or non compliance with the laws and regulations
- Inability to create and maintain a competitive advantage

From the senior executives and middle level management point of views, “Revenue Leakage” was a principal risk they thought would have a company-wide impact to the Sub-case and rated by the two levels of management at 4.67 and 4.5 out of 5, respectively.

Figure 4. 6: Graphical presentation of perceptions of Executive & Middle Level Management over the Principal Risks that may have Company-Wide Impact in Sub-Case Y



Source: developed by the author

(b) Interviews on probe questions Research Question 3

Senior executives and middle-level management were interviewed based on the probe questions (**E1, E3, E4, E5, E6, E7, E8, and E9**); and the responses are detailed in the Appendix E. Important comments which were demonstrated in the responses are highlighted below:

- Perception of what the principal risks are for your CASE (**E1**): “Principal risk would be one that would lead to non-achievement of the Objectives of the company; These are Fraud risks which would result into financial”
- Why consider these risks to be principal for your CASE? (**E3**): “Principal risks have high impact; since we are service provider any risks that disrupts the service can cause social resentment”
- Why manage the principal risks in the CASE anyway? (**E4**): “To enable the company to achieve organizational goals; to safeguard the company; because of high impact, principal risks need to be managed”
- The position of the board of directors in the management of the principal risks & their role (**E6**): “Should play advisory role, and monitoring; set tone from board to the management to implement controls; they offer or play oversight role; board has responsibility to mandate the management to achieve the objectives”
- Position of CEO in the management of the principal risks (**E7**): “CEO should be the champion; CEO should be enabler of risk management and control and set tone from above; CEO has overall ownership of principal risks”
- My role in the management of the principal risks for your CASE (**E8**): “May role is that I take responsibility for risks as a manager and cascade it to my Subordinates; I see my role as risk champion, and advocate of risk management; as head of a function, I should implement risk mitigations at departmental level”
- Position of the officer in charge of business risk management (BRM) in your CASE in relation to the management of the principal risks (**E9**): “Is the custodian of risk data base and mitigating control solutions; advocate of risk management in the company; BRM to oversee the implementation and ensure strategic risks are mitigated”

- **Significant observations.** Consideration of who should take the responsibility for the management of the principal risks in the CASE (**E5**): the interviewees both at the senior executive and middle-level management were not certain as to who should take the responsibility. Some of the respondents said that it was responsibility of the “head of departments; risk champions in particular areas; CEO and senior officers; it is a joint effort by management team; senior management because they have strategic mission to manage the company”

4.4.3.3 Case Analysis: Sub-Case Z: Research Question 3.

(a) Rating the Principal Risks.

Senior executives and middle-level management were asked to rate the principal risks they perceived as having company-wide impact as given in Appendix A (Part E), of the interview protocol. Results are presented in Appendix J (Table J-5&6) from which the graphical presentation in Figure 4.7 was extracted. Figure 4.7 compares the perceptions of the senior executives and the middle level management over the principal risks.

Comparatively, senior executives perceived the listed as “principal risks they thought as-would have a company-wide impact” and rated them higher than the middle-level management:

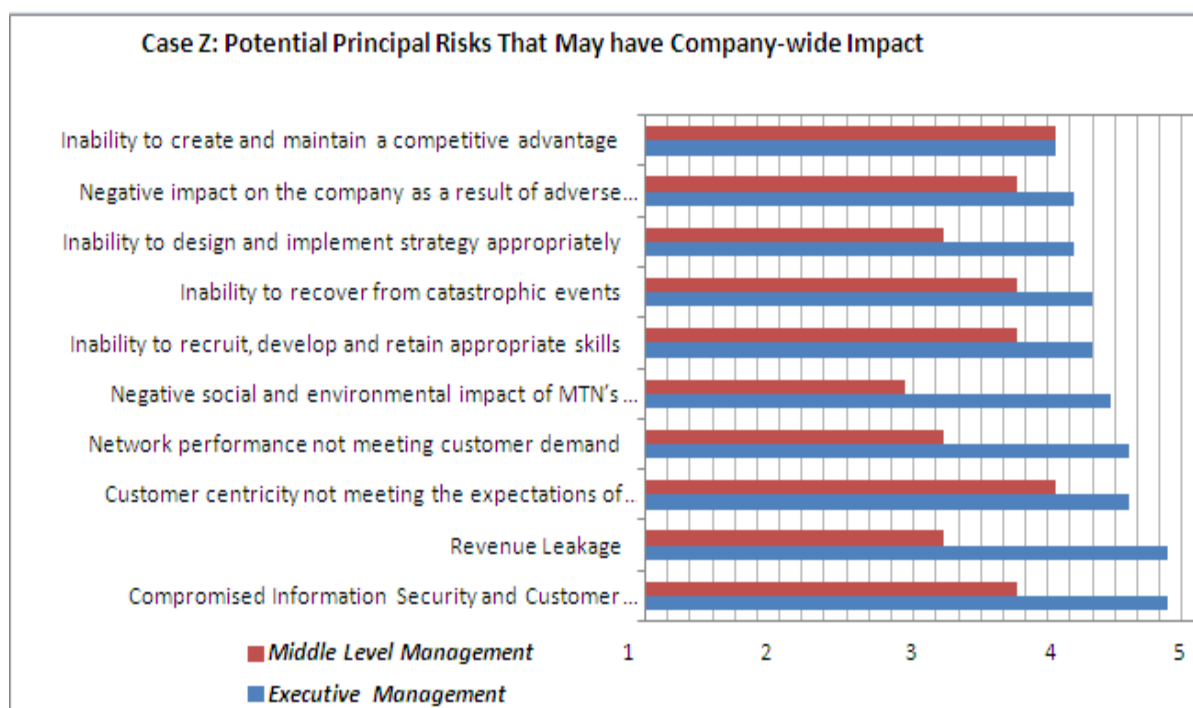
- Compromised Information Security and Customer Privacy
- Revenue Leakage
- Negative social and environmental impact of MTN’s actions
- Network performance not meeting customer demand
- Customer centricity not meeting the expectations of the customer and not embedded in the company

Middle-level management, perceived the following principal risks as would have a company-wide impact” than others in the set:

- Inability to create and maintain a competitive advantage
- Customer centricity not meeting the expectations of the customer and not embedded in the company.

- From the senior executives and middle level management point of views, the “Customer centricity not meeting the expectations of the customer and not embedded in the company” was a principal risks they all thought would have a company-wide impact to the Sub-case, however, it was considered by senior executives as having higher impact 4.3 compared to middle management at 3.67 out 5 respectively. It was interesting to note that all middle level management rated lower than the senior executives very significantly, with respect to all the risks.

Figure 4. 7: Graphical presentation of perceptions of Executive & Middle Level Management over the Principal Risks that may have Company-Wide Impact in Sub-Case Z



Source: developed by the author

(b) Interviews on probe questions Research Question 3

Senior executives and middle-level management were interviewed based on probe questions and the responses are detailed in the Appendix E. Important comments which were demonstrated in the responses are briefly highlighted below:

- Perception of what the principal risks are for your CASE (E1): “These are risks such as regulatory, political and financial; these are high impact risks”
- Why consider these risks to be principal for your CASE? (E3): “To ensure business continuity; because of their high impact on the company;

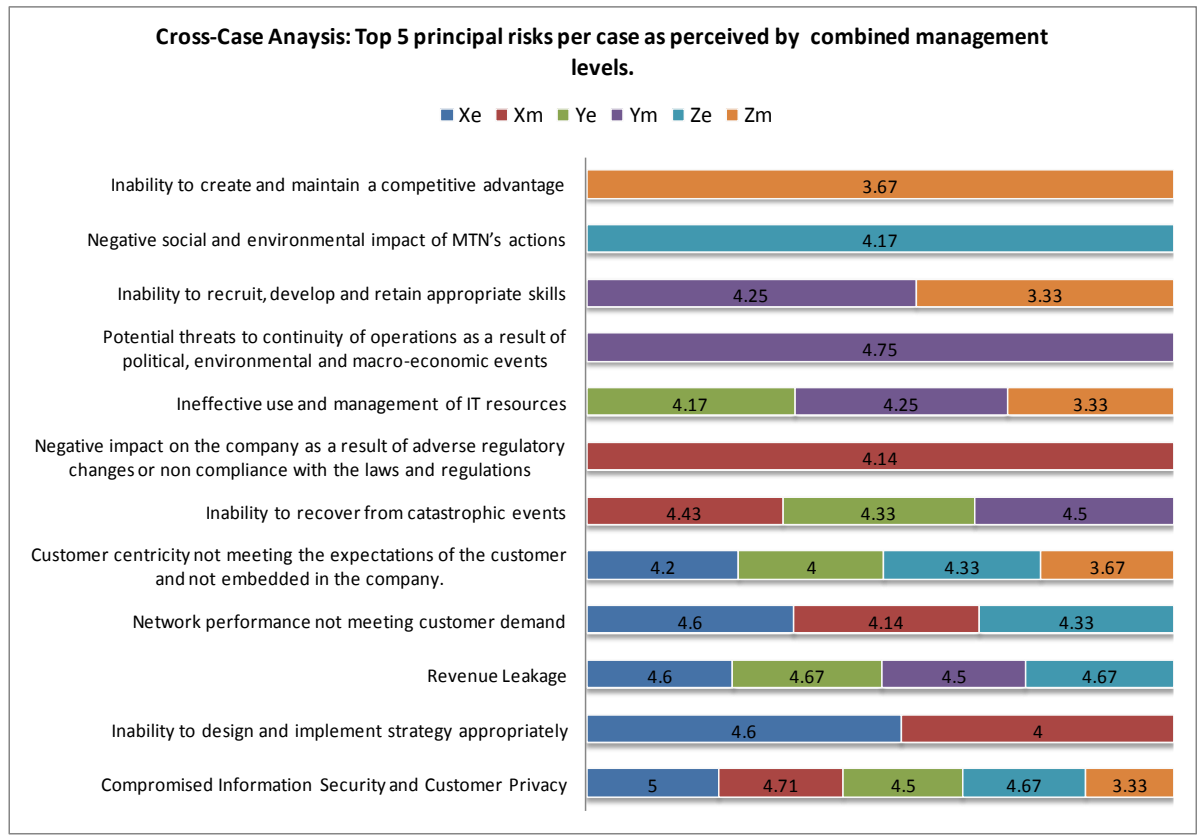
- Why manage the principal risks in the CASE anyway? (E4): “to ensure business continuity otherwise the license can be withdrawn; when principal risks are not controlled, they can affect the operations of the company”
- The position of the board of directors in the management of the principal risks & their role (E6): “Their position is very essential, as they need to monitor the risks; oversight role to enforce risk controls implementation; they manage the shareholder interests.”
- Position of CEO in the management of the principal risks (E7): “CEO role of review and ensure that high level risks identified reported to the board; CEO should lead by example, and set targets with respect to risk management; CEO should ensure the risk mitigations are implemented and properly monitored”
- My role in the management of the principal risks in the CASE (E8): “My role is to identify, control and monitor risks in my department; I am part of the management team and ensure that risk mitigation actions are implemented”
- Position of the officer in charge of business risk management (BRM) in your CASE in relation to the management of the principal risks (E9): “BRM officer should liaise with other managers to implement all risks mitigating controls identified; BRM is very essential, is the eyes & ears of the CEO and the Board in respect of the risks; BRM is champion of risks management”
- **Significant observations.** Consideration of who should take the responsibility for the management of the principal risks in the CASE (E5): both interviewees were not certain as to who should take the responsibility. Some of the respondents said that it was the responsibility of “head of business risk management (BRM) because of dedicated resources; all management team (CEO & rest of executive); or CFO”

4.4.3.4 Intra Cases Analysis of Research Question 3

The intra-case analysis set out to find out what were the top 5 principal risks perceived by the combined management levels of Executives (e) and Middle level managers (m) across the three cases (X, Y, Z). The interviewees were asked to rate the potential principal risks as given in Appendix A (Part E) of the interview protocol for which results are presented in Appendix J (Table J-1 to 6). Figure 4.8 presents the top 5 principal risks:

- “Compromised information security and customer privacy” was held as most principal risk that could have company- wide impact across the three cases by all senior executives and middle-level management, with the exception of the middle-level managers in case Y. They rated this factor from a range of 3.33 to 5 out of 5
- “Revenue Leakage” was held next most principal risk that could have company- wide impact across the three cases by all senior executives and middle-level management, with exception of the middle-level managers in cases X and Z. They rated this factor from a range of 4.5 to 4.67 out of 5
- “Customer centricity not meeting the expectations of the customer and not embedded in the company” was held next most principal risk that could have company- wide impact across the three cases by all senior executives and middle-level management, with exception of the middle-level managers in cases X and Y. They rated this factor from a range of 3.67 to 4.33 out of 5
- “Network performance not meeting customer demand” was held next most principal risk that could have company- wide impact across case X by senior executives and middle-level management, along with all the senior executives of the case Z, however, senior executives and middle-level of Case Y, and middle-level management of cases, Z, didn’t consider this principal risk to have company- wide impact across the cases. Those who considered this principal risk factor rated it from the range of 4.14 to 4.6 out of possible 5
- “Inability to recover from catastrophic events” was held next most principal risk that could have company- wide impact across case Y by senior executives and middle-level management, along with all the middle-level management of case X, however, senior executives and middle-level of Case Z, and senior executives of case X, didn’t consider this principal risk to have company- wide impact across the cases. Those who considered this principal risk factor rated it between 4.33 to 4.5 out possible of 5
- “Ineffective use and management of IT resources” was held next most principal risk that could have company- wide impact across case Y by senior executives and middle-level management, along with all the middle-level management of case Z, however, senior executives and middle-level of Case X, and senior executives of case Z, didn’t consider this principal risk to have company- wide impact across the cases. Those who considered this principal risk factor rated it between the range of 3.33 to 4.25 out of possible 5.

Figure 4. 8: Intra Cases Analysis; Top 5 principal risks that may have company- wide impact across the three cases (X, Y, Z) as perceived by the combined management levels of Executives (e) & Middle level managers (m)



Source: Developed by the author

4.4.3.5. Summary of the findings on Research Question 3.

Comparatively, senior executives in case X; rated the “principal risks’ higher than their middle level management team. Middle level management perceived the ‘Compromised Information Security and Customer Privacy, and ‘Inability to recover from catastrophic events’ as would -have very high impact. The senior executives and middle level management, however, perceived the ‘Compromised Information Security and Customer Privacy’ as a principal risk that, would have most company-wide impact to the Sub-case, and they rated it at 4.7 out of 5 and, 5 out of 5 respectively.

In case Y; senior executives and middle level managers almost perceived the same number of “principal risks that could have a company-wide impact”, although are of differing nature. However, from senior executives and middle level management point of views, “Revenue

Leakage” was a principal risk they thought would have most company-wide impact to the Sub-case and they rated it at 4.67 and 4.5 out of 5, respectively.

From case Z, senior executives perceived and rated higher more principal risks than the middle-level management. From the senior executives and middle level management perspectives, the ‘Inability to create and maintain a competitive advantage’ was a principal risk they all perceived would have a company-wide impact to the Sub-case, however, it was not considered by senior executives as having most high impact, and was rated at 3.67 out of 5 each.

Arising from the responses from all cases regarding the position of BRM officer with respect to risk management, the interviewees perceived the position as necessary in the coordination, reporting and the management process of the principal risks (E9) to the Board. As earlier observed, the issue of who should take the overall responsibilities for the management of the principal risks in the cases (E5) was still being confused between the BRM, CEO and CFO.

Intra-cases analysis: ‘Compromised information security and customer privacy’ was perceived by the interviewees as a principal risk that would have most company- wide impact across the three cases, with the exception of the middle-level managers in case Y. The ‘Compromised information security and customer privacy’ as a most perceived principal risk, could be associated with the industry sector of Information Communications Technology (ICT) which MTN is operating (Appendix M: Sustainability report 2011-Pp13; Integrated Business Report 2011-Pp 55-57); where MTN is exposed to comprises of systems by people or technological failures, and it is also a regulatory requirement to protect information and customer privacy in all the cases.

Overall findings in this research question indicate that interviewees perceived and understood consequential impact principal risks can pose to the cases, and perceived that EWRM implementation would provide a holistic view of the risks.

4.4.4 Research Question 4: Describe any anticipated barriers to implementation.

In Chapter Two, Sub Sections 2.3.2 and 2.5.1.2; it was indicated that there was much confusion about what was meant by EWRM (Deloitte. 2008); and organizations were struggling with defining their programs so that they could demonstrate the value of improved risk management. Taking EWRM approach in risk management was deemed a costly

initiative as observed in survey carried out by Corporate Executive Board (2004). In their report on the “Current State of Enterprise Risk Oversight Survey”; Beasley. M; et al. (2010: pp13-14), found that there were impediments to embracing EWRM oversight. It was from this perspective the research question 4 was developed to test the perceived barriers for implementation of EWRM in the respective cases.

The focus of the research question 4 was to find out how senior executives and their mid-level management anticipated barriers to EWRM implementation in their respective cases. This research question has three parts: (a) for intra-case analysis of the anticipated barriers to implementation as perceived by senior executives, (b) for intra-case analysis of the anticipated barriers to implementation as perceived by middle level management, and (c) the interview responses to the probe questions (F1, F2, F3, F4, F5, F6, F7). The interviewees were asked to rate those anticipated barriers to implementation as they perceived them, on basis of 5-point Likert scale: 1_2_3_4_5 with 1 being lowest and 5 being highest as given in Appendix A (Part F) of the interview protocol. In considering of all the data from the 32 interviews, the researcher analyzed Sub-cases in terms of “case analysis” and “intra cases analysis” in order to establish themes and patterns for the Research Question 4.

4.4.4.1 (a) Intra-Cases analysis of the barriers to EWRM implementation as anticipated by Senior Executives.

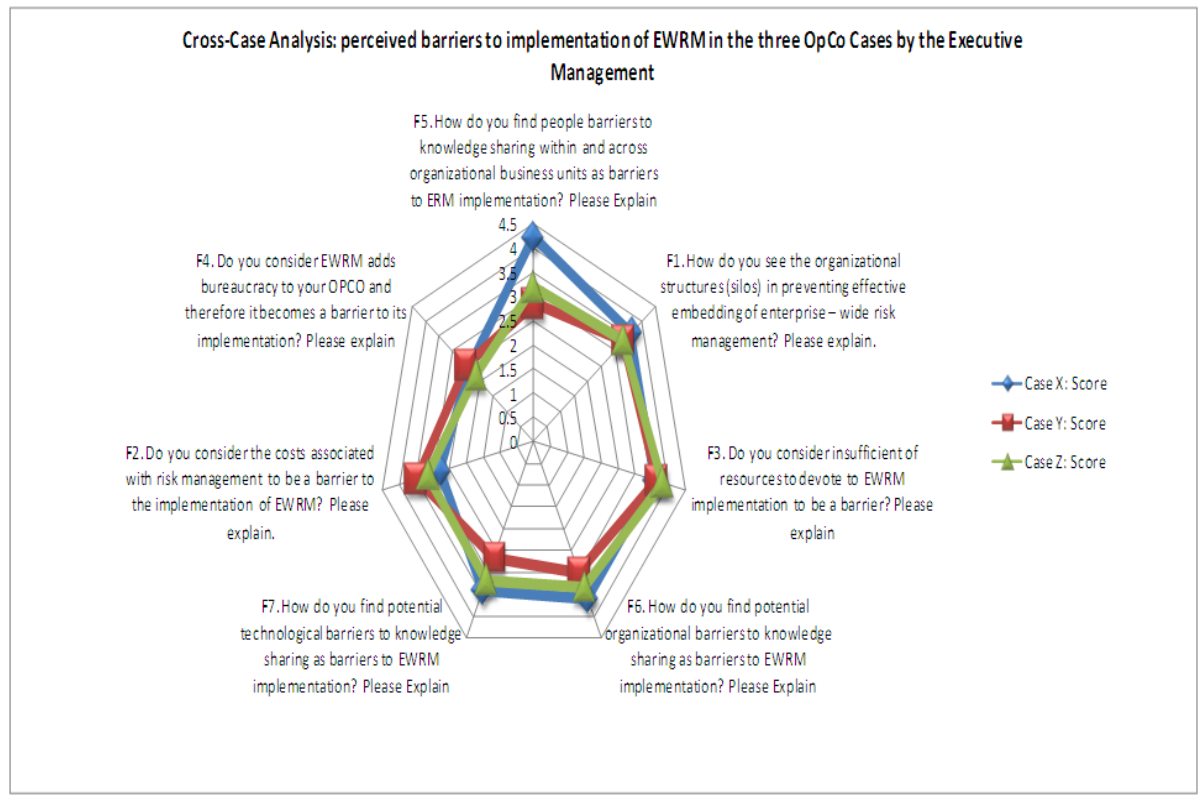
Interviewees were asked to rate those anticipated barriers to implementation as they perceived them from the factors given in the Appendix A. (Part F) of the interview protocol. Data from the Appendix K (Tables: K-1, K-3 & K-5) was used in the construction of the web-based presentation in **Figure 4.9** and the analysis was made on the basis of the seven barrier factors detailed below:

- From the people barrier factor (F5) perspective, senior executives in the Case X, perceived it as the most barrier to EWRM implementation and rated it at 4.5 out of 5, than the rest of other senior executives from the other two cases. Senior executives in the Case Z, perceived, the people barrier factor high at 3 out of 5, however, the executives from Case Y, didn't see this as a major factor, and they rated 2.5 out of 5.
- From the organizational structure-silo barrier factor (F1), senior executives in the case X, perceived it as a high barrier to implementation of EWRM and rated it at 3 out of 5,

however, the rest of the senior executives from the other two cases Y&Z, considered it as barrier and rated it slightly below case X executives.

- From the resource sufficiency barrier factor (**F3**), senior executives in all the three cases seemed to agree and perceived the factor as a high barrier to implementation of EWRM and rated it at 3.5 out of 5.
- From the organizational structure to knowledge sharing barrier factor (**F6**) , senior executives in the cases X and Z, perceived this factor as a high barrier to implementation of EWRM and rated it at 3.5 out of 5, however, the senior executives from the case Y, considered it as barrier too, but rated it slightly below at 3 out of 5.
- From the technological barrier factor (**F7**), senior executives in the cases X and Z, perceived this factor as a high barrier to implementation of EWRM and rated it at 3.5 out of 5, however, the senior executives from the case Y, considered it as barrier too, but rated it slightly below at 3 out of 5.
- From the cost of risk management barrier factor (**F2**), senior executives in the case Y, perceived it as a high barrier to implementation of EWRM and rated it at 3.5 out of 5, however, the rest of the senior executives from the other two cases X & Z, considered it as barrier but rated it slightly below case Y executives.
- From EWRM as bureaucratic barrier factor (F4), senior executives in all the three cases didn't seem to perceive the factor as a barrier to implementation of EWRM since it is driven by board of director through MTN senior executives.

Figure 4. 9: Intra-Case Analysis: Perceived barriers to Implementation of EWRM by the Executive Management in the three cases



Source: Developed by the author

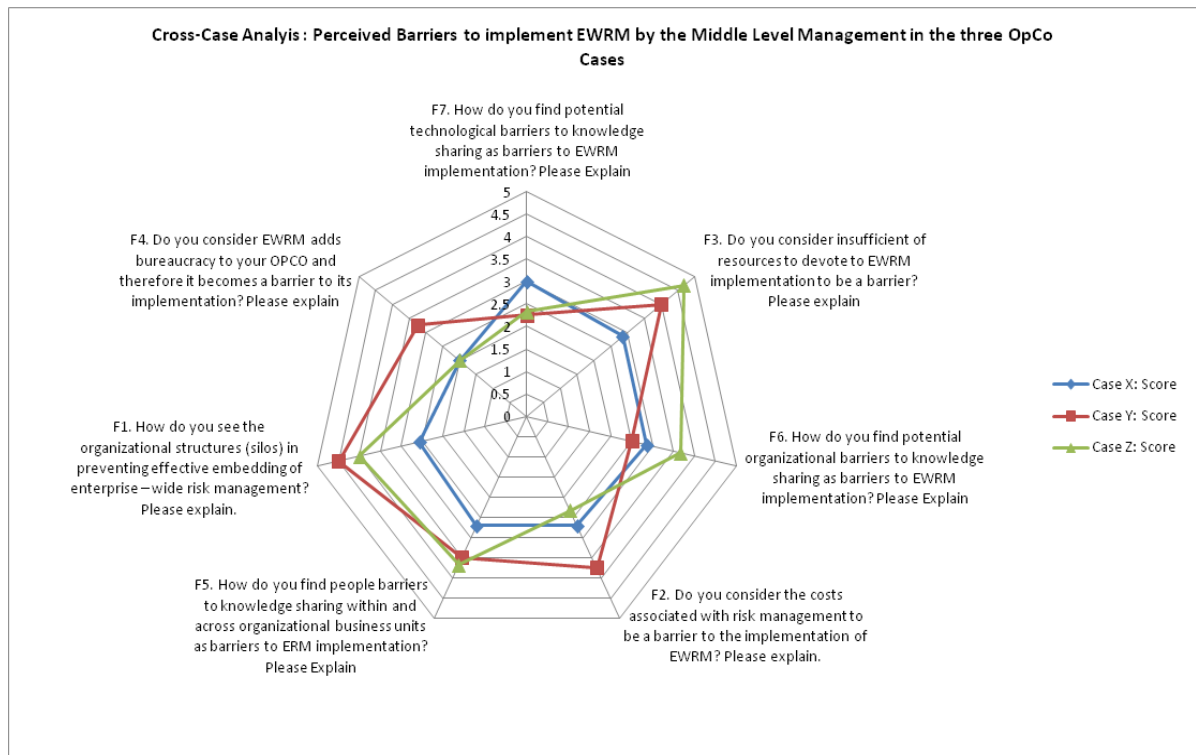
4.4.4.1 (b) Intra-Cases Analysis of the barriers to EWRM implementation as anticipated by Middle Management

Middle level management was asked to rate those anticipated barriers to implementation as they perceived them from the factors given in the Appendix A (Part F) of the interview protocol. Results of the ratings are given in the Appendix K (Table K-2, K-4 & K-6) from which a web-based presentation in **Figure 4.10** was extracted and analysis was made on basis of the seven barrier factors detailed below:

- From the resource sufficiency barrier factor (**F3**) perspective, middle-level management in the Case Z, perceived the factor as most barrier to implementation of EWRM and rated it at 4.5 out of 5, than the rest of other middle-level management from the other two cases. Middle-level management in the Case Y, perceived, the resource sufficiency barrier factor high at 4 out of 5, however, the middle-level management from Case X, rated it at 3 out of 5.

- From the organizational structure to knowledge sharing barrier factor (**F6**), middle-level management in the Case Z, perceived the factor as higher barrier to implementation of EWRM and rated it at 3.5 out of 5, than the rest of other middle-level management from the other two cases. Middle-level management in the Case X, perceived the organizational structure to knowledge sharing barrier factor at 2.5 out of 5, and in Case Y, rated it at 2 out of 5 respectively.
- From the cost of risk management barrier factor (**F2**), middle-level management in the case Y, perceived it as a higher barrier to implementation of EWRM and rated it at 4 out of 5, than the rest of other middle-level management from the other two cases. Middle-level management in the Case X, perceived the risk management barrier factor high at 3 out of 5, while the middle-level management from Case Z, rated it lower at 2.5 out of 5.
- From the people barrier factor (**F5**), middle-level management in the Case Z, perceived it as the most barrier to implementation of EWRM and rated it at 4.5 out of 5, than the rest of other middle-level management from the other two cases. Middle-level management in the Case Y, perceived the people barrier factor high at 4 out of 5, however, the middle-level management from Case X, didn't see this as a major factor, and they rated 3 out of 5.
- From the organizational structure-silo barrier factor (**F1**), middle-level management in the Case Y, perceived the factor as most barrier to implementation of EWRM and rated it at 4.5 out of 5, than the rest of other middle-level management from the other two cases. Middle-level management in the Case Z, perceived, the organizational structure-silo barrier factor high at 4 out of 5, however, the middle-level management from Case X, rated it at 2.5 out of 5.
- From EWRM as bureaucratic barrier factor (**F4**), middle-level management in the case Y, perceived it as a high barrier to implementation of EWRM and rated it at 3.5 out of 5, however, the rest of the middle-level management from the other two cases Y&Z, considered it less as barrier and rated it 2 out of 5.
- From the technological barrier factor (**F7**), middle-level management in the case X, perceived it as a high barrier to implementation of EWRM and rated it at 3 out of 5, while the two cases X and Z, perceived this factor as a lesser barrier to implementation of EWRM and both rated it at 2 out of 5, respectively.

Figure 4. 10: Intra-Case Analysis: Perceived barriers to Implementation of EWRM by the Middle Level Management in the three cases



Source: Developed by the author

(c) Interviews on Probe Questions Research Question 4

4.4.4.2 Case Analysis: Sub-case X: Interviews on Probe Questions Research Question 4.

Senior executives and middle-level management were interviewed based on probe questions and the responses are detailed in the Appendix F. Important comments which were demonstrated in the responses with respect to anticipated barriers to implementation are briefly highlighted below:

- Organizational structure-silo barrier factor in preventing effective embedding of enterprise – wide risk management (**F1**): “when there is no interrelationship between business units, then it will be hard to implement EWRM; when you don’t work as team, you will fail to implement EWRM, so working in silos will be a barrier to implementation of EWRM; MTN is well structured, and there are no silos. However, where organization structure- is in silos- it can be a barrier to implementation of EWRM”
- Costs associated with risk management to be a barrier to the implementation of EWRM (**F2**): “Yes, EWRM is a cost driven process, and costs can be barrier to the EWRM implementation”

- Insufficiency (or lack of adequate resources) of resources to devote to EWRM implementation barrier factor **(F3)**: “If there is no cash, then this will be hindrance and will act as barrier to implementation of EWRM; Yes, people, and other resources can be a barrier to implementation of EWRM if are not available”
- People barriers to knowledge sharing within and across organizational business units as barriers to EWRM implementation **(F5)**: “If people keep quiet and don’t share information about risks in their departments, this will act as a barrier to implementation of EWRM; Yes, if people are not sharing knowledge, it can be a barrier in implementation of EWRM”
- Potential organizational barriers to knowledge sharing as barriers to EWRM implementation **(F6)**: “Yes, it can be a barrier; however, communication systems in MTN can mitigate this; yes, people barrier in sharing knowledge can be a barrier in implementation of EWRM, especially the lower levels where buy-in can prove difficult”.
- Potential technological barriers to knowledge sharing as barriers to EWRM implementation **(F7)**: “Technological challenges, will act as barrier to the implementation of EWRM; Technology changes more often, and this can pose challenges to knowledge sharing and this in turn will pose implementation barrier to EWRM”.
- **Significant observations.** The comments from respondents in Sub-Case X in **F4**; both the senior executives and middle level management did not consider that EWRM adds bureaucracy to the case such that it would be considered a barrier to its implementation. They perceived it would not arise in MTN because it is driven by the board of directors through the CEO and the senior executives.

4.4.4.3 Case Analysis: Sub-case Y: Interviews on Probe Questions Research Question 4.

Senior executives and middle-level management were interviewed based on probe questions and the responses are detailed in the Appendix F. Important comments which were demonstrated in the responses with respect to anticipated barriers to implementation are briefly highlighted below:

- Organizational structure-silo barrier factor in preventing effective embedding of enterprise – wide risk management **(F1)**: “It is important to have organization structure that is open as opposed to silos-that can be a barrier for implementation of EWRM; Yes,

this can be a barrier, as it can be referred to as “ it is not my problem” to implement EWRM”

- Costs associated with risk management to be a barrier to the implementation of EWRM **(F2)**: “DRP cost is very high to install, this can be a barrier to EWRM implementation; Yes, EWRM costs can be a barrier to implementation if benefits are not communicated properly”
- Insufficient of resources to devote to EWRM implementation barrier factor **(F3)**: “No, I don’t think resources are utilized at this moment to act as a barrier to EWRM implementation; Yes, people and other resources, are essential, can act as barriers to the implementation of EWRM”
- EWRM adds bureaucracy to your CASE and therefore it becomes a barrier to its implementation **(F4)**: “Yes, where EWRM is a new system, if there is no buy-in, it will be viewed as bureaucratic; No. in MTN it can’t be seen as bureaucratic. It is essential process.”
- People barriers to knowledge sharing within and across organizational business units as barriers to ERM implementation **(F5)**: “Yes, it can be a barrier, as people resist change; Yes, where there is no buy-in for EWRM, it will not be shared and this will be a barrier to its implementation”
- Potential organizational barriers to knowledge sharing as barriers to EWRM implementation **(F6)**: “Yes, it can be a barrier; however, communication systems in MTN can mitigate this; Yes, if the organization structure is not well supported from the top, and no knowledge sharing across, it will be a barrier to the implementation of EWRM.”
- Potential technological barriers to knowledge sharing as barriers to EWRM implementation **(F7)**: “Yes, it can be a barrier. However, MTN has tools in place such as intranet where all staff can share knowledge. We are a Telecoms Company; this barrier shouldn’t be a big risk; Systems integration can sometimes be a challenge and this can act as a knowledge sharing barrier to implementation of EWRM. This is not applicable to Telecoms Company like MTN.”

- **Significant observations.** The comments from respondents in the probe question **F3**, certain executives stated that they didn't think resources are utilized at this moment to act as a barrier to EWRM implementation in this Case. In the probe question **F4**, middle level management didn't consider EWRM adds bureaucracy to the case such that it would be considered a barrier to implement. They perceived EWRM as an essential process, because it is driven by the board of directors through the CEO and the senior executives. In the probe question **F7**, technological was not considered a potential barrier since MTN was Technology Company.

4.4.4.4 Case Analysis: Sub-case Z: Interviews on Probe Questions Research Question 4

Senior executives and middle-level management were interviewed based on probe questions and the responses are detailed in the Appendix F. Important comments which were demonstrated in the responses with respect to anticipated barriers to implementation are briefly highlighted below:

- Organizational structure-silo barrier factor in preventing effective embedding of enterprise – wide risk management (**F1**): “It is important to have organization structure that is open, silos are bad; In MTN, this wouldn't apply as EWRM is driven by the board; Ordinarily, can be a barrier, but not an issue in MTN currently.”
- Costs associated with risk management to be a barrier to the implementation of EWRM (**F2**): “Yes, e.g. DRP cost money to install, therefore, costs could be a barrier to implementation of EWRM; Yes, EWRM is a cost driven process, and costs could be barrier to the EWRM implementation”
- Insufficient of resources to devote to EWRM implementation barrier factor (**F3**): “Yes, but it should not be specified to EWRM only, it is across the other processes; Yes, if you don't have people and other resources, then these will act as barriers to the implementation of EWRM”
- EWRM adds bureaucracy to your CASE and therefore it becomes a barrier to its implementation (**F4**): “No, EWRM is critical and continued operation in the Case, it couldn't be seen as bureaucratic; No. in MTN it can't be seen as bureaucratic. It is driven by the board.”

- People barriers to knowledge sharing within and across organizational business units as barriers to ERM implementation (**F5**): “Yes, it can be a barrier; yes, it is due to perceptions and it could be a barrier.”
- Potential organizational barriers to knowledge sharing as barriers to EWRM implementation (**F6**): “Yes, it could be a barrier, however, it can be mitigated: through group forums in MTN; Staff members in other functions see EWRM as audit, and this can act a barrier to knowledge sharing and consequently a barrier to EWRM implementation.”.
- Potential technological barriers to knowledge sharing as barriers to EWRM implementation (**F7**): “Yes, it can be a barrier. However, MTN has tools in place such as intranet where all staff can share knowledge. We are Telecoms Company; this barrier shouldn’t be a big risk; Systems integration can be a challenge sometimes, and this can act as a knowledge sharing barrier to implementation of EWRM; this is not applicable to Telecoms Company like MTN.”
- **Significant observations.** The comments for the probe question **F1**; from respondents in this Sub-Case Z: Executives perceived organizational structures (silos) - can be barriers. However, this cannot be an issue in MTN currently. Middle level management thought that it wouldn’t apply to MTN as EWRM is driven by the board. In **F3**, executives agreed that insufficient of resources to devote to EWRM implementation would be a barrier, however, it should not be specific to EWRM only, as resources insufficiency cut across other processes as well. **F4**, executives perceived that it couldn’t be seen as bureaucratic in MTN, since it is driven by the board. Middle level management perceived EWRM as critical for continuity in operation of the case; couldn’t be seen as a bureaucratic system. **F6**, executives agreed it could be a barrier, however, it could be mitigated through group forums in MTN. Middle level management agreed it can be a barrier as some staff members in other functions see EWRM as internal audit, and this could act as a barrier to knowledge sharing. **F7**, executives agreed potential technological barriers to knowledge sharing; however, MTN has tools in place such as intranet where all staff can share knowledge. Some of the middle level management thought this was not applicable to a Telecoms Company like MTN, anyway!

4.4.4.5. Summary of the findings on Research Question 4.

From the people barrier factor (**F5**) perspective, senior executives in the Case X, perceived it as the main barrier to implementation and rated it at 4.5 out of 5, than the rest of other senior executives from the other two cases.

From the bureaucratic barrier factor (**F4**), senior executives in all the three cases didn't seem to perceive the factor as a barrier to implementation since it is driven by the board of director.

Middle-level management in the Case Z, perceived the resource sufficiency barrier factor (**F3**) as a main barrier to implementation and rated it at 4.5 out of 5, than the rest of other middle-level management from the other two cases.

Overall findings in this research question indicated that interviewees agreed with the anticipated barriers to implementation of EWRM in their respective Sub cases. However, the bureaucratic barrier factor was not perceived a major factor, since the system is driven by board of director through MTN senior executives. (Appendix M: MTN Group Limited: Integrated Business Report 2011:pp55-57)

4.4.5 Research Question 5: Would knowledge sharing and enhanced communication assist in overcoming the barriers?

From the literature review in Chapter Two, Sub Sections: 2.4.2 & 2.5.1.3, risk knowledge sharing is part of the people interactions in an organization (Rodriguez, E., Edwards, J. 2010). People in the organization come from multiple disciplines with different knowledge and experiences (McLaughlin, S; et al. 2008). Current business complexity calls for more knowledge on the risk information (Sutcliffe, K., Weber, K. 2003) in order to build actionable answers to risk threats. Hence, knowledge sharing approaches would have a critical impact to the EWRM implementation in the organization. It would involve people/employees' buy-in, supporting systems and processes. The focus of the research question 5 was to find how knowledge sharing and enhanced communication would assist in overcoming the barriers to the implementation. Responses from the probe questions for the research question were taken from Appendix A (Part G) of the interview protocol. Responses to the questions (**G1, G2, G3, G4, G5, G6, G7, G8**) were used for the purposes of analysis. In considering all the data from the 32 interviews as captured in Appendix G, the researcher

analyzed Sub-cases in terms of “Case analysis” in order to establish themes and patterns for the research question.

4.4.5.1 Case Analysis; Sub-Case X: Research Question 5.

Senior executives and middle-level management were interviewed based on the probe questions and the responses are detailed in the Appendix G. Important comments demonstrated in the responses are briefly highlighted below:

- How do you consider knowledge sharing as a means to overcome implementation barriers associated with EWRM in your CASE? **(G1)**: “Yes, it is an effective tool to share knowledge; as this will overcome the barriers to EWRM implementation. Yes, Knowledge sharing is part of communication and is very critical in overcoming EWRM implementation barriers i.e. with managers, general staff, and this is where awareness campaign can be made about EWRM ”
- Can business procedures and processes as knowledge sharing factors be used to overcome EWRM implementation barriers? **(G2)**: “Since we are in technology environment, policies, procedures and processes (PPP), are key to knowledge sharing and therefore can act to overcome EWRM implementation barriers; PPPs are very important as they put the standards of operating in the company, and this can be used to overcome the EWRM implementation barriers”
- Can support and understanding of knowledge sharing by senior executives and middle level managers be necessary to overcome implementation barriers associated with EWRM system in your CASE? **(G3)**: “Yes, this is very critical. Buy-in from everybody is critical so as to overcome EWRM implementation barriers; yes, the support is very important as the tone from above gives the guidance and confidence to the staff and this can help in overcoming the EWRM implementation barriers”
- Can senior executives and middle level managers motivate people in the CASE to share their knowledge more openly, so as to overcome implementation barriers associated with EWRM system? **(G4)**: “Incentives, recognition, cash; yes, this can be done by empowering people by providing a platform where they can share freely and openly; such as 360 degree, intranet. Recognition of knowledge sharing incentives e.g. through MTN program of employee of the month in the knowledge sharing ”

- Can leadership and managerial direction overcome implementation barriers associated with EWRM system? **(G5)**: “This can be done through the CEO road shows, email broadcast to all the staff, and in-house magazine; very critical as the leadership gives the direction, guidance, recognize and encourage interaction between business units staff members and share knowledge about EWRM”
- Can people be a factor in knowledge sharing so as to overcome implementation barriers associated with EWRM system? **(G6)**: “Passing information to others, internal tools- such as intranet; people are critical factor, in knowledge sharing because if they are positive about EWRM, they will overcome the implementation barriers, and if negative, they will hold the information on the risks, and can sabotage the process.”
- Can organizational structure be a factor in knowledge sharing so as to overcome implementation barriers associated with EWRM system?**(G7)**: “Structure can be critical factor, in that it can act as channel in terms of awareness campaign- channels of communication and it will overcome the EWRM implementation barriers if properly utilized; an open organization structure (as opposed to Silo) will help in overcoming knowledge sharing, which in turn will overcome EWRM implementation barriers.”.
- Can knowledge sharing of Web based IT solutions overcome EWRM implementation barriers in your CASE? **(G8)**: “Use tools such as Video conference, intranet, and e-Learning system; Web-based solutions can be very fast, as it offers a platform where most people can exchange information, exchange or share knowledge, and will provide a vehicle to overcome EWRM implementation barriers”

4.4.5.2 Case Analysis; Sub-Case Y: Research Question 5.

Senior executives and middle-level management were interviewed based on probe questions and the responses are detailed in the Appendix G. Important comments demonstrated in the responses are briefly highlighted below:

- How do you consider knowledge sharing as a means to overcome implementation barriers associated with EWRM in your CASE ?**(G1)**: “It is very important for management team to change the mentality where risk is seen as bothersome for lack of understanding but rather share the knowledge on the risks, and this will overcome

EWRM implementation barriers. If knowledge is not shared it will not be easy to communicate about EWRM implementation”

- Can business procedures and processes as knowledge sharing factors be used to overcome EWRM implementation barriers? **(G2):** “Use of technology to enhance the sharing PPPs, and in turn these PPPs will act to overcome EWRM implementation barriers; PPPs must be available shared across, and carry out survey across employees to establish acknowledgement, as the PPPs can act to overcome EWRM implementation barriers.”
- Can support and understanding of knowledge sharing by senior executives and middle managers be necessary to overcome implementation barriers associated with EWRM system in your CASE? **(G3):** “If there is no support from the top executive then it would be frustrating to implement EWRM; there is a need to have the buy-in of all stakeholders for overcoming the EWRM implementation barriers; Yes, the support and understanding is necessary and this can further be enhanced by the use of MTN academy’s e-Learning as the study materials on EWRM will be available to everybody, and this will overcome the EWRM implementation barriers”
- Can senior and middle level managers motivate people in the CASE to share their knowledge more openly, so as to overcome implementation barriers associated with EWRM system? **(G4):** “Risks need to be identified at the department level, and shared across, motivate all the staff to share the knowledge on risk freely and openly; Recognition for sharing knowledge, this is an MTN program known as Y’ello Star, make awareness of sharing knowledge openly to company black boards, as this will overcome the EWRM implementation barriers.”
- Can leadership and managerial direction overcome implementation barriers associated with EWRM system? **(G5):** “Support from top management is essential. Commit resources and time, and walk the talk about the EWRM implementation; Leading by example: the leadership and entire management team should be in the forefront in sharing knowledge on EWRM, and be ready to embrace it, and this will overcome the EWRM implementation barriers as it is cascaded to the lower levels.”

- Can people be a factor in knowledge sharing so as to overcome implementation barriers associated with EWRM system? **(G6)**: “This is critical, people fear that they will be victimized. However, a lot of explaining, utilizing tools such as Intranet may be used to overcome EWRM implementation barriers through people; Yes, people are the drivers of change, and we are the stakeholders, thus how we support knowledge sharing among the people will determine the extent of how the barriers to implement EWRM are overcome.”
- Can organizational structure be a factor in knowledge sharing so as to overcome implementation barriers associated with EWRM system **(G7)**: “Complicated organization structure will hinder project delivery; remove silos, so as to overcome EWRM implementation barriers; Yes, it can be: if work is in silos, you can have gaps within the functional units in the understanding and appreciation of risks. Thus the organizational structure can be a factor in overcoming the EWRM implementation barriers.”
- Can knowledge sharing of Web based IT solutions overcome EWRM implementation barriers in your CASE? **(G8)**: “Web-based solutions are very critical in the overcoming EWRM implementation barriers, in that the MTN Intranet, portals are all platforms where information on risks can be shared very fast, any time, by every staff; Sharing knowledge faster is facilitated technologically today by hosting the information on the web. MTN has a portal where it shares all the materials on risks. This can be accessed at any time, by every staff member. Thus web- based solutions can overcome EWRM implementation barriers.”

4.4.5.3 Case Analysis; Sub-Case Z: Research Question 5.

Senior executives and middle-level management were interviewed based on probe questions and the responses are detailed in the Appendix G. Important comments demonstrated in the responses are briefly highlighted below:

- How do you consider knowledge sharing as a means to overcome implementation barriers associated with EWRM in your CASE? **(G1)**: “It is a key thing, i.e. educating people the importance of EWRM. This is can be done through knowledge sharing; I think Knowledge sharing is very important among the stakeholders, including risk professionals, where they educate the people about EWRM.”

- Can business procedures and processes as knowledge sharing factors be used to overcome EWRM implementation barriers? **(G2):** “PPPs are very important as they can show where there are the gaps. These gaps can be closed by sharing knowledge freely through PPPs. So PPPs can be used to overcome EWRM implementation barriers; PPPs are very important as they put the standards of operating in the company, and help in the knowledge sharing to the new people in the company including information on the company risks. So these PPPs can act to overcome EWRM implementation barriers.”
- Can support and understanding of knowledge sharing by senior executives and middle managers be necessary to overcome implementation barriers associated with EWRM system in your CASE? **(G3):** “Yes, this is very essential. Buy-in from everybody is critical so as to overcome EWRM implementation barriers; yes, the support is very important, because if you don’t have their buy-in, then you will have a long way to go in order to overcome the EWRM implementation Barriers.”
- Can senior and middle level managers motivate people in the CASE to share their knowledge more openly, so as to overcome implementation barriers associated with EWRM system? **(G4):** “Can use the available means such as: Internal communication systems of emails, CEO road show, intranet, etc, all these would enhance the means to share knowledge openly and freely, which would overcome the EWRM implementation barriers; It is important to share knowledge, and this should be encouraged, and emphasized to share the knowledge freely and openly. This should be by leading by examples.”
- Can leadership and managerial direction overcome implementation barriers associated with EWRM system? **(G5):** “Set clear vision, and it must be communicated in relation to EWRM. KPA/KPI’s, for managers need to be clearly articulated in relation to the risk management. With this EWRM implementation barriers will be overcome through the support of the leadership and managerial direction; First of all there should be recognition that there are barriers, and leadership should come out with solutions such as: business units can talk to each other openly & freely; set forums, where EWRM implementation barriers would be discussed.”
- Can people be a factor in knowledge sharing so as to overcome implementation barriers associated with EWRM system? **(G6):** “Give people a platform to share knowledge,

reward them for knowledge transfer, and set up KPA/KPI for monitoring the success of knowledge sharing. This will overcome EWRM implementation barriers; People are critical factor, as they hold the knowledge. So they would overcome the EWRM implementation barriers, if they can share the knowledge they have. This can only be done if there are forums for this.”

- Can organizational structure be a factor in knowledge sharing so as to overcome implementation barriers associated with EWRM system? **(G7):** “Organizational structure is very critical because an open structure will facilitate easy and smooth flow of information as opposed to silo based structure which will prevent free flow of information. So organizational structure can be a factor in knowledge sharing so as to overcome EWRM implementation barriers; Allow free flow of information between business divisions, and this will allow interaction with respect to knowledge sharing including EWRM. This interaction will overcome EWRM implementation Barriers.”
- Can knowledge sharing of Web based IT solutions overcome EWRM implementation barriers in your CASE? **(G8):** “Web-based solutions are very critical in the overcoming EWRM implementation barriers, in that the MTN Intranet, portals are all platforms where information on risks is exchanged electronically; Web- based solutions will be enablers for knowledge sharing once the materials are hosted on the web. Others tools such as emails can also be used so that EWRM implementation barriers are overcome.”

4.4.5.4. Summary of the findings on Research Question 5.

Overall, interviewees are in agreement that knowledge sharing and enhanced communication would assist in overcoming the barriers of implementing EWRM. They highlighted a number of possible channels that could be used including: processes, policies and procedures (PPPs) which would be available and shared across the cases, the use of MTN academy’s e-Learning and make available the study materials on EWRM, make recognition for sharing knowledge on risks, use the company boards mounted in the specified locations, set up forums where staff members can exchange ideas on EWRM issues, and use other MTN IT resources such as email system, Intranet and the MTN portals. Respondents further commented that for an effective knowledge sharing and enhanced communication process for overcoming the barriers of EWRM implementation, people should be given a platform where they can share

knowledge, reward them for knowledge transfer, and set up Key performance indicators (KPI) for monitoring the success of knowledge sharing on EWRM.

4.4.6 Research Question 6: What strategies could be adopted to overcome the implementation barriers associated with EWRM?

Chapter Two, Sub- Section: 2.3.4; business environment is constantly changing; consequently EWRM implementation is a never ending process. Sustaining EWRM implementation requires constant attention by senior executive management (Shenkir, G.W., Walker, L.P. 2007; Beasley, M.S., Frigo, M. 2010). EWRM ties in closely with corporate governance by improving information flows between the company and the board regarding risks (Tonello, M. 2007); and this enhances discussions of strategy and the related risks between executives and the board. It was from the above perspectives, the research question 6 set to find out what strategies could be adopted to overcome the implementation barriers and how successful might they be.

The probe questions for the above research question were taken from Appendix A (Part H) of the interview protocol and responses to the questions (**H1, H2, H3, H4, H5, H6, H7**) were used for the purposes of analysis. In considering all the data from the 32 interviews as captured in Appendix H, the researcher analyzed Sub-cases in terms of “Case analysis” in order to establish themes and patterns for the research question.

4.4.6.1 Case Analysis; Sub-Case X: Research Question 6.

Senior executives and middle-level management were interviewed based on probe questions and the responses are detailed in the Appendix H. Some comments from the interviewees are briefly highlighted below.

- Board of directors Involvement (**H1**): “should approve resources for implementation of EWRM; CEO wouldn’t be successful in EWRM implementation without the board of directors on his side”.
- Adoption of risk management as a competitive advantage strategy (**H2**): “historically MTN has always taken risks in the business it undertakes. If didn’t take risks, then it would not be competitive in business today. Use awareness campaign on EWRM implementation through information sharing- use intranet”.

- Strategy of identification and modeling of risks **(H3)**: “because management will identify the risks and will be compelled to manage them thereon. Success can be taken on the basis of awareness campaign, and embedding the strategy in the processes and procedures put in place. This can successfully be implemented by involving participants in workshops, carry out sensitivity analysis of the risks, and get buy-in from participants. This process would overcome EWRM implementation barriers”.
- Strategy of looking beyond a compliance mindset **(H4)**: “will work out better if brought about in a workshop, and focus more on broader vision. Such workshops will bring in buy-in, and would help to overcome EWRM implementation barriers”
- Integration strategy **(H5)**: “use workshops, departmental champions, CEO road shows, and make full awareness campaign about the EWRM by integrating it across the case. This process would overcome EWRM implementation barriers”.
- Risk executive with oversight role **(H6)**: “should report directly to the board. He /she will receive all the co-operation from the CEO and the management team”.
- Risk awareness is embedded in the organizational culture **(H7)**: “This can be enforced by the board through the CEO road shows, the company-wide awareness campaign. Use frequent surveys- such as intranet, use champions, involve head of departments, to gauge how the EWRM implementation barriers are being overcome”.

4.4.6.2 Case Analysis; Sub-Case Y: Research Question 6.

Senior executives and middle-level management were interviewed and their responses are detailed in the Appendix H. Some of the key comments are briefly highlighted below:

- Board of directors Involvement **(H1)**: “their instructions will be implemented successfully by the management”.
- Adoption of risk management as a competitive advantage strategy **(H2)**: “its success can be measured by brand health/strength, good reputation, customer satisfaction and retention”.
- Strategy of identification and modeling of risks **(H3)**: “can successfully be implemented by having the entire management team buy-in, and this will be enforced through the Key

performance indicators (KPI) set for them; in order to overcome the EWRM implementation barriers, this can succeed once the management team has Key performance indicators (KPI) for identification and modeling risks as one of the objective targets”.

- Strategy of looking beyond a compliance mindset **(H4)**: “it will succeed if it is tied to the performance of the management team; e.g. based on bonus awards on those differentiating solutions implemented across the organization, however, one has to be aware of the ENRON case”.
- Integration strategy **(H5)**: “it can be successful if EWRM is put as one of the Key performance indicators (KPI) and also included into the balance rate card of the CEO and the management team and further be enhanced through the CEO road shows”.
- Risk executive with oversight role **(H6)**: “will overcome the implementation barriers associated with EWRM when the officer reports directly to the board. He /she will work closely with the CEO and will drive the implementation of EWRM through the management team and oversee those barriers as they arise, and take necessary measures”.
- Risk awareness is embedded in the organizational culture **(H7)**: “can be successful once the people are aware of the risk environment, this can be communicated at the CEO road shows, newsletter, and through the intranet by means of awareness campaign in terms of knowledge sharing”.

4.4.6.3 Case Analysis; Sub-Case Z: Research Question 6.

Senior executives and middle-level management were interviewed and their responses are detailed in the Appendix H. Key comments from the respondents are briefly highlighted below:

- Board of directors Involvement **(H1)**: “is very critical, in that they can question the management; Board can set the Key performance indicators (KPI) for the management and track them against the successful implementation of the EWRM”.
- Adoption of risk management as a competitive advantage **(H2)**: “is very important strategy, since risk management compels CEO and the management team to question

their plans with respect to risks inherent within those plans. Scenario analysis of the risks will be performed and this can be a part of competitive advantage.”

- The strategy for identification & modeling risks (**H3**): “will help in mitigating risks in future; however, one needs to evaluate the model by analyzing and carrying out business case for each risk against the benefits”.
- Strategy of looking beyond a compliance mindset strategy (**H4**): is important, however, imposition of differentiating solutions to the management team will not work. Homegrown solutions will work; management team has to have the buy-in, for the differentiating solutions to be implemented across the organization. Otherwise, they will retreat to the old strategy of compliance mindset.
- Integration strategy (**H5**): is very important, and for it to be used for overcoming implementation barriers associated with EWRM, it will have to be one of the Key performance indicators (KPI) and this could also be enhanced through the CEO road shows; there will also be a need to focus all executive management team to the integration of EWRM in whatever they are doing, and applied across all functions, and put into executives Key performance indicators (KPI).
- Strategy of establishing a risk executive (**H6**): this office would drive the importance of the EWRM, and the executives will report the implementation status of EWRM to the board. However, internal audit and risk management should rather be separated, and oversight office embarks on risk management and attaches KPI for the implementation of EWRM, as this will overcome the EWRM implementation barriers.
- Risk awareness is embedded in the organizational culture (**H7**): “can be successful only if management team’s KPI were to include EWRM implementation. Communication and awareness are both critical across the organization in the campaign to implement EWRM. Success can be registered by use of posters & fliers, emails and intranet as awareness campaign channels”.

4.4.6.4. Summary of the findings on Research Question 6.

Overall findings in this research question were that the strategies to be adopted to overcome the EWRM implementation barriers would be:

- Involvement of the board of directors (Appendix M: Corporate Governance: pp7) where they would set Key performance indicators (KPI) for the management team to implement EWRM,
- Use of scenario analysis of the risks which would be a part of competitive advantage strategy as it will compel the CEO and the management team to question their plans from the EWRM implementation perspective.
- Take a strategy of identification and modeling risks that would be used to evaluate the model by analyzing and carrying out business case for each risk against the benefits to be derived at the enterprise -wide level;
- A strategy of looking beyond a compliance mindset: would succeed if it is tied to the performance of the management team; e.g. based on bonus awards on those differentiating solutions to implement EWRM across the organization.
- Integration strategy of EWRM would be successful if it was put as one of the KPIs and also included into the balanced score card of the CEO and the management team and further be enhanced through the CEO road shows.
- Risk awareness and communication are both critical across the organization in the campaign to implement EWRM; success could be registered by use of “posters & fliers, emails and intranet as awareness campaign channels” and devising KPI around the successful EWRM implementation.

4.5 Conclusions

This chapter has analyzed the data collected from the three embedded Sub-case companies in relation to the six research questions. It provided both case and intra-case analyzes of the data, identified patterns and matrices in the findings.

- Research Question One (RQ1); It is concluded interviewees perceived the EWRM system as cutting across all functions in their case companies and indicated they have a role to play in its implementation. However, in terms of overall responsibilities for EWRM implementation in the cases; un-certainties were observed across all three cases.
- Research Question Two (RQ2); from the practice perspective, it is concluded that the interviewees at the three Sub cases perceived ‘Sustainability of future profitability’ as

what would motivate them most to implement EWRM. This perception could be attributed to employee rewards based on short and long-term incentives, such as the performance system of bonus, notional shares based on profitability as one of the key performance areas for the senior executives and middle level management respectively.

- Research Question Three (RQ3); it is concluded interviewees perceived and understood the consequential impact of principal risks could have on the case companies, they perceived that introducing an EWRM system would bring holistic view over management control of the risks. Interviewees assessed the impact of the risks differently in their respective case companies.
- Research Question Four (RQ4) it is concluded interviewees perceived the factors would act as barriers to EWRM implementation in their respective Sub-cases. However, bureaucratic barrier factor was not perceived as major factor, since the EWRM is driven by board of director in the MTN through the senior executives.
- Research Question Five (RQ5); it is concluded interviewees perceived knowledge sharing and enhanced communication would assist in overcoming the barriers of EWRM implementation. A number of communications channels were highlighted as means that would enhance communications in the cases.
- Research Question Six (RQ6). It is concluded interviewees perceived strategies that would be adopted to overcome EWRM implementation barriers successfully such as: involvement of the board of directors; use of scenario analysis of the risks; a strategy of identification and modeling risks by analyzing and carrying out business case for each risk against the benefits to be derived at the enterprise -wide level; risk awareness and communication across the organization in the campaign to implement EWRM by using appropriate communication tools in the MTN.

Based on the analysis of the data collected in this study, it is concluded that research questions findings are congruent with expectations, thus producing literal replication. However, un-certainties were observed across all three cases with respect to overall responsibilities for EWRM implementation.

Up to this point, the data presented has not been contrasted with the literature discussed in Chapter Two; no interpretation, or implications from the results. Chapter Five will examine

the findings and offer final conclusions, implications, limitations and propose directions for future research.

CHAPTER 5 - CONCLUSIONS

5.1 Introduction

This chapter reports on the research findings and draws conclusions based on the research outcomes and is informed by the preceding literature reviews. In short, it addresses the key research question: *‘What are the Implementation Barriers to the Introduction of Enterprise-Wide Risk Management (EWRM) In an African Telecommunications Enterprise?’*

In **Chapter One**, the background to the research problem was presented with particular reference to implementation barriers associated with the introduction of EWRM in an African Telecommunications Enterprise.

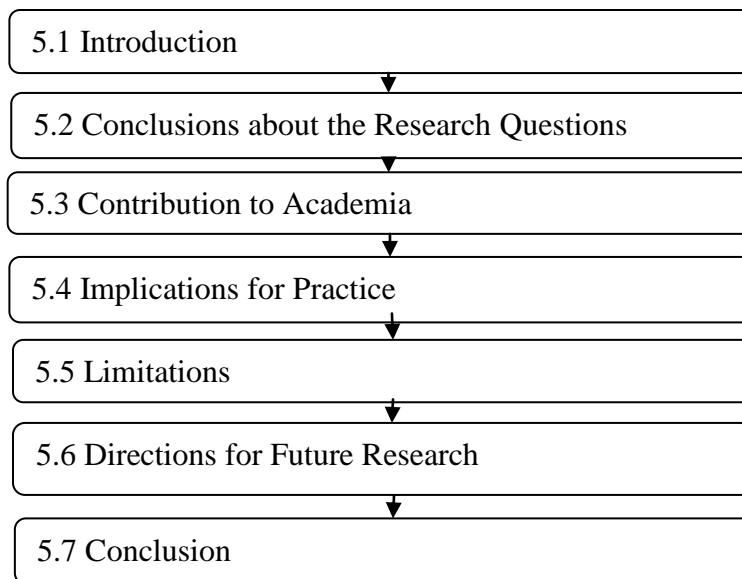
In **Chapter Two**, the literature on EWRM was reviewed, gaps were identified and six research questions were proposed to answer the research problem. The chapter began with an overview on risk and risk management, as arising from increasing pace of innovation, corporate governance and compliance, and technological change. However, EWRM implementation was not easy for industries to implement. It was noted that the board of directors and executive management play an important role in the adoption of EWRM and its implementation. Organizations operate in very competitive conditions that keep changing; they often need to adjust in order to survive. Thus to manage the change risks holistically, it requires EWRM implementation, which in turn requires people support in terms of risk knowledge sharing. However, people come from multiple disciplines with different knowledge and experiences working together in the organizations. There are barriers to knowledge sharing which were highlighted.

In **Chapter Three**, the case study research methodology was adopted for this study within the critical realism paradigm. The chapter presented justification of the realism paradigm and of case study method. The single case study with embedded Sub-cases was justified for this study. The interviewees were a representative sample of management staff members from MTN companies. The chapter concluded with a discussion of the limitations of case study research and ethical considerations for this study.

Chapter Four, analyzed the data collected from the three embedded Sub-case companies in relation to the six research questions. It provided both case and intra-case analyses of the data and identified patterns and matrices for each of the six research questions.

Chapter Five, The chapter is organized into seven sections as shown in Figure 5.1 and it draws the conclusions and implications of this study. It starts with the introduction in Section 5.1. Section 5.2 highlights the conclusions of findings for each research question and their relationship to the literature review in Chapter Two. Section 5.3 outlines the contribution to the academia in terms of implications for knowledge where a number of new models are proposed. In Section 5.4, implications for practice within the firm are outlined. Section 5.5 highlights limitations of the study and indicates how these can be reconciled. Section 5.6 proposes further research directions, for both quantitative and qualitative research. Section 5.7 concludes the chapter.

Figure 5. 1: Outline of Chapter 5



Source: Author

5.2 Conclusions about the Research Questions

This Section examines the findings for each of the six research questions. Through this examination, conclusions are drawn based on the extent to which the research questions have been covered by existing literature and the contribution gained by the data analysis presented in Chapter Four.

5.2.1 Research Question 1: What are senior executive and mid-level management perceptions and understanding of an EWRM system?

Research Question 1 sought to find out the perceptions and understanding of the senior executive and mid-level management with respect to EWRM system in their respective case companies.

The findings in Section 4.4.1.4 indicated that most of the senior executives and the middle level management understood the essence of EWRM system, perceiving it as necessary and noting that it should cut across all functions. In relation to the literature, EWRM framework (COSO, 2004:pp2), Sub Section 2.3.3, suggested that EWRM should be effected by people at every organizational level and this included taking an enterprise-wide portfolio view of risks. This holistic approach aims at actively involving all people in the organization. However, people come from different disciplines in the organization, and may perceive risk differently (Helliard, V.C; et al. 2001; Riabacke, I. 2006). This means that it would be very important to appreciate this situation in the process of the EWRM implementation in the organization as highlighted in Chapter Two Section 2.2. It is observed by Helliard, V.C; et al. (2001:pp7) that:

“any risk management system will have input from, or be implemented by individuals and therefore the attitudes of these individuals to risk may have an important bearing on the successful implementation of the system”. Helliard, further observed *“individuals in a wide variety of settings incorporate biases into their decisions that may result in inappropriate risks being taken or risks being ignored altogether”.*

Overall, this study showed that management team in the case companies of MTN Group demonstrated understanding and perception of EWRM as essential. EWRM (COSO, 2004:pp2) was supported to a larger extent. This is also attributed to the maturity of the case companies of more than 10 years of operation which suggests more awareness of EWRM.

Despite the observed awareness of EWRM, there were uncertainties observed across all three cases, with respect to who should take overall responsibilities for the EWRM implementation in the cases. COSO- 2004 equips:

“Everyone in an entity has some responsibility for enterprise risk management. The chief executive officer is ultimately responsible and should assume ‘ownership’. Other managers support the risk management philosophy, promote compliance with

the risk appetite, and manage risks within their spheres of responsibility consistent with risk tolerances...”

A defining characteristic of how EWRM is implemented; is the extent to which roles and responsibilities are clearly defined. From the practice perspective, senior and middle management were not all fully aware of respective roles of responsibilities. This could easily translate into delays and misunderstandings in the EWRM implementation process.

5.2.2 Research Question 2: What are the potential motivators for the implementation of EWRM?

The findings in Chapter Four, Sub-Section **4.4.2.5** indicated that most of the senior executives and the middle level management perceived the most common motivating factor to implement EWRM system as “Sustainability of future profitability”. The second most rated perceived motivating factor was the “infusing a risk culture in the organization”, with the exception of the senior executives in the case Y; who perceived the “compliance with regulation” as the second most motivating factor for implementation. This was further triangulated in the MTN Group Integrated Business Report 2011: Pp 55-57 (Appendix M).

This research question brought to light that interviewees at the three Sub-cases perceived “sustainability of future profitability” as what would motivate most to implement EWRM. From the practice perspective, this perception could be attributed to employee rewards based on short and long-term incentives, such as bonus payment based on profitability as one of the key performance areas for the senior executives and middle level management respectively. This was further triangulated in the MTN Group Integrated Business Report 2011-Pp 60-62 (Appendix M). Additionally, the maturity of the cases which are more than 10 years in operation; profitability is critically reviewed by the board of directors.

From the literature review perspective, Chapter Two, Sub- Section 2.3.5; Beasley, S.M; et al. (2008) and Gates, S., et.al. (2009) extend the EWRM literature by moving beyond its adoption question and examined aspects of whether it adds value (Subramanian, R.I., et al. 2010). Beasley, S.M; et al. (2008) concluded that a well implemented EWRM program could create value when it restricted the likelihood of significant downside risks such as financial distress. Gates, S., et.al. (2009), on their part extended their study on the earlier work by examining the value seen inside the company as measured by better decision making and increased profitability by reviewing components of COSO-2004. Their study suggested that a good EWRM environment and communications system of top- down and bottom- up on

EWRM missions, coupled with explicit risk tolerance levels, positively influenced better decision making, and this could appear to have an impact on profitability.

It is suggested that the studies of Beasley, S.M; et al. (2008), and Gates, S., et.al. (2009) are supported in this study, although not explicitly demonstrated.

5.2.3 Research Question 3: What are the principal risks associated with introducing an EWRM and how may they be managed?

Chapter Four, Sub- Section 4.4.3.5, indicated that interviewees confirmed the challenges posed by a number of the principal risks as identified. They perceived and understood consequential impact risks could have on the Sub-cases, and introducing an EWRM could bring holistic view of risks and control. The ‘compromised information security and customer privacy’ was perceived as a principal risk that could have most company- wide impact across the three cases.

From the literature review in Chapter Two Sub Sections 2.3.1, it is suggested that from EWRM perspective management is able to consider all significant exposures, such as political trends, technology shifts, competitor moves (DeLoach, J.W. 2000; Bowling, D.M.; Rieger, L.A. 2005; Beasley, S.M; 2005; Manab, A.N; et al. 2010). EWRM can increase the firm’s capability to respond with a superior ability to the internal and external risks and this intervention may be able to stabilize earnings of the firm (Andersen, T.J., 2008), which can increase the shareholder value. Corporate failures can be caused by inefficient risk management practices (Manab, A.N; et al. 2010). Deloitte (2004) survey found most of the firms analyzed their risks but focus lied mainly on financial risks. Most of the companies with EWRM placed its use solely for complying with regulatory requirements and failed to identify other principal risks that would have company-wide impact. Nocco, B.W., Stulz, R.M. (2006) discussed the theory and practice of EWRM in the nationwide insurance; highlighted the process and challenges involved in implementing EWRM arising from assessing its risk appetite; measure their risks, and noted major difficulties that arise in practice when implementing EWRM. In, Sub- Section 2.3.6; Ernst & Young (2008, 2009) noted a number of strategic and operational risks faced by Telecommunication operators in Africa, how they responded to such risks determined their competitive advantage. DeLoach, J.W. (2000) suggests that management of risks could suitably be implemented through a model of EWRM which is integrative in nature.

The findings of this research question are supported in the literature studies although not directly. A well designed EWRM would achieve the core objectives of an enterprise by improving better decision-making at all levels of the organization. As an integrated risk management process (Ryu, C.Y. 2008), EWRM identifies and assesses principal risks that can have impact on the organization. Thus, well implemented EWRM program could create value by better decision making and this could increase profitability; DeLoach, J.W (2000).

5.2.4 Research Question 4: Describe any anticipated barriers to implementation of EWRM.

Overall findings in this research question in Chapter Four, Sub- Section 4.4.4.5; indicated that interviewees agreed with the anticipated barriers to EWRM implementation in their respective Sub-cases. However, bureaucratic barrier factor was not perceived a major factor.

Literature review of Chapter Two, Sub-Sections 2.3.2 and 2.5.1.2; indicated that there was much confusion about what was meant by EWRM (Deloitte. 2008); and organizations were struggling with defining their programs, and to demonstrate the value of improved risk management. Taking EWRM approach in risk management was deemed a costly initiative as observed in a survey carried out by Corporate Executive Board (2004). However, this observation was not demonstrated in the responses to research questions 1, 2 and 3. In their report on the “current state of enterprise risk oversight survey”; Beasley, S.M; et al. (2010: pp13-14), found from the respondents that there were impediments to embracing EWRM oversight, which included “Competing priorities, insufficient resources, lack of perceived value, perception that EWRM adds bureaucracy and lack of board or senior executive EWRM leadership”. In this research question, however, certain anticipated barriers to implementation of EWRM were agreed, but lack of board or senior executive to drive was not anticipated barrier in the cases. Leadership of the board of directors (BOD) and executives (Gordon, A.L., et al. 2009) play an important role in the adoption and the successful EWRM implementation program (Beasley, S.M; et al. 2010). Under the EWRM approach, the activities of BOD become broader (Fraser, I., Henry, W. 2007; Brown, I., et al. 2009). Some researchers observed that understanding of the EWRM by business managers seemed to be clouded in common misconceptions (Acharyya, M., Johnson, J. 2006; Fraser, R. S. J; Simkins, J. B. 2007), and this was therefore to be an obstacle to successful implementation of EWRM. However, it was established from the research question 1, that

MTN management team understood and confirmed the essence of EWRM. However, there were few misunderstandings: EWRM was seen as confusing between ‘internal audit and risk management’; also it was not clear who was to take overall full responsibility of EWRM implementation in the case companies.

Overall, it is suggested that the findings of this research question are supported in the literature studies. However, bureaucratic barrier factor was not perceived a major factor to act as a barrier to EWRM implementation in MTN.

5.2.5 Research Question 5: Would knowledge sharing and enhanced communication assist in overcoming the barriers?

Overall findings in this research question in Chapter Four, Sub-Section 4.4.5.4; indicated interviewees are in agreement; knowledge sharing and enhanced communication would assist in overcoming the barriers of implementation. The knowledge sharing channels were highlighted. Respondents further commented that for an effective knowledge sharing and enhanced communication process for overcoming the barriers of implementation, people should be given a platform where they can share knowledge, reward them for knowledge transfer, and set up KPI for monitoring the success of knowledge sharing on EWRM.

From the literature review in Chapter Two Sub-Sections: 2.4.2, risk knowledge sharing is part of the people interactions in an organization (Rodriguez, E., Edwards, J. 2010). People in the organization come from multiple disciplines with different knowledge and experiences working together (McLaughlin, S., et al. 2008). Current business complexity call for more knowledge on risk (Sutcliffe, K., Weber, K. 2003) in order to build actionable answers to threats. Hence, knowledge sharing approaches would have a critical impact to the EWRM implementation in the organization.

People are important in sharing of knowledge (Goh, S.C. 2002; Smale, A. 2007). Nonaka, I., Takeuchi, H. (1995) suggest that knowledge can be in two distinct types: tacit and explicit. Tacit knowledge is personal, and explicit knowledge is codified, more formal and easier to transmit. Small, C., Sage, A. (2006) reviewed knowledge management and knowledge sharing, and they regarded knowledge sharing as critical in knowledge creation. Knowledge sharing has a strong social dimension and social exchanges (Jasimuddin, M.S. 2008). Corti, E., Lo Storto, C. (2000) highlight that common coffee and lunch breaks are settings that enable knowledge sharing due to the fostering of personal closeness. Cohen, W.M.,

Levinthal, D.A. (1990) suggest that the knowledge sharing is a critical factor in an organization's ability to respond quickly to change, innovate and achieve competitive success. There is growing evidence (Argote, L., Ingram, P. 2000; Argote, L., et al., 2000) which indicates that organizations which share knowledge within its business units (Goh, S.C. 2002) are likely to be more productive when compared to those organizations that are less inclined to sharing knowledge.

Marshall, C., Prusak, L. (1996) observed that risk management is frequently not a problem of lack of information, but rather lack of knowledge with which to interpret its meaning. When a new risk is identified it implies that new knowledge is required (Shaw, J. 2005; Fourie, L., Shilawa, J. 2005; Caldwell, F. 2008). Risk knowledge sharing can be negatively influenced by business silos (Rodriguez, E., Edwards, J. 2010). Riege, A. (2005) observes that 'despite the growing significance of knowledge sharing's practices; there are a number of barriers that make it difficult for Knowledge management to achieve the goals and deliver a positive return on investment. These barriers were tested in this research question:

- Interviewees agreed that people barriers to knowledge sharing would impact implementation as this originated from individual behavior, perceptions within business functions (Riege, A. 2005). Knowledge-sharing barriers are often related to factors such as lack of motivation to share information (Perrin, A., et al. 2007; McLaughlin, S; et al. 2008), lacking communication skills and social networks (Riege, A. 2005; Staplehurst, J., Ragsdell, G. 2010). However, the ability of employees to share knowledge depends first and foremost on their communication skills (Davenport, T.H.; Prusak, L. 1998; Hendriks, P. 1999; Meyer, P. 2002; Mathew, V; Kavitha, M. 2009).
- Interviewees agreed that potential organizational barriers to knowledge sharing would be a barrier to EWRM implementation; as this is related to the right corporate environment conditions (McLaughlin, S; et al. 2008), there are a number of possible organization-based barriers to knowledge sharing. According to (Riege, A. 2005:pp26) these barriers can be: "lack of leadership and managerial direction in terms of clearly communicating the benefits and values of knowledge sharing practice, shortage of appropriate infrastructure supporting sharing practices, communication and knowledge flows are restricted into certain directions (top-down)."

Thus, providing an appropriate infrastructure and sufficient resources to facilitate sharing practices is the basis of a successful knowledge management program (Schlegelmilch, B.B., Chini, T.C. 2003; Riege, 2007; McLaughlin, S; et al. 2008; Singh, D.M., Kant.R. 2008).

- Interviewees agreed that potential technology barriers would impede Implementation. It is imperative to have interactions between people and technology to facilitate sharing practices (Davenport, T.H. 1996). Ruddy, T. (2000) argued that improving knowledge sharing in a meaningful way required a delicate marriage of technology with a keen sense of cultural or behavioral awareness. Technology has the ability to offer instant access to large amounts of data and information, which can be shared by teams (Riege, A., O’Keeffe, M. 2003). However, potential technology barriers to knowledge sharing may arise, in accordance to Riege, A. (2005:pp29) from “Lack of integration of IT systems and processes which can impede on the way people do things.”

Overall, the findings of this research question are indirectly supported in the literature studies. It is also observed that respondents suggested that for an effective knowledge sharing and enhanced communication process for overcoming the barriers of implementation, people should be given a platform where they can share knowledge, reward them for knowledge transfer, and set up KPI for monitoring the success of knowledge sharing on EWRM.

5.2.6 Research Question 6: What strategies could be adopted to overcome the implementation barriers associated with EWRM?

Overall findings in Chapter Four, Sub-Section 4.4.6.4; indicated the strategies adopted to overcome the implementation barriers successfully would be:

- The involvement of the board of directors (Appendix M: Corporate Governance: Pp7); where directors would set KPI for the management team to implement EWRM.
- Use of scenario analysis of the risks which could be a part of competitive advantage strategy, it would compel the CEO and the management team to question their plans from the implementation perspective.
- Taking a strategy of identification and modeling risks, would be used to evaluate the model by analyzing and carrying out business case for each risk against the benefits to be derived at the enterprise -wide level.

- A strategy of looking beyond a compliance mindset would succeed if it were tied to the performance of the management team based on bonus awards on those differentiating solutions implemented across the organization.
- Integration strategy of EWRM would be successful if it was put as one of the KPI's and also included into the balanced score card of the CEO and the management team and further enhanced through the CEO road shows.
- Risk awareness and communication strategies, are both critical across the organization in the campaign to implement EWRM; success could be registered by use of posters & fliers, emails and intranet as awareness campaign channels; and devising KPI around the successful EWRM implementation. These initiatives would apply as strategies which could be adopted to overcome the implementation barriers associated with EWRM.

From the literature review in Chapter Two Sub-Sections: 2.3.4; business environment is constantly changing; consequently EWRM implementation is a never ending process. Sustaining EWRM implementation requires constant attention by senior executive management (Shenkir, G.W., Walker, L.P. 2007; Beasley, M.S., Frigo, M. 2010). EWRM ties in closely with corporate governance by improving information flows between the company and the board regarding risks (Tonello, M. 2007); it enhances discussions of strategy and the related risks between executives and the board. Flow of risk information to the board is critically important in improving corporate governance (Smith, D., Politowski, R. 2006:pp43-65; Tonello, M. 2007; Brown, I., et al. 2009). This is illustrated in the MTN group report (2009), which presented its risk maps to its audit committee of the board to keep them fully informed.

Strategy of identification and modeling of risks can successfully be implemented by having the entire management team buy-in. This can take place within the strategy formulation session (Beasley, M.S., Frigo, M. 2010; Arena, M., et al. 2010) when all key stakeholders are present.

Integration strategy of risk management programs across the organization to overcome the EWRM implementation barriers would succeed if integration of the Balanced Score Card (BSC) with EWRM can be enhanced (Beasley, M.S., et al. 2006). EWRM adds value to the BSC through the identification of risks that could stand in the way of achieving the targets in each of the four perspectives- Customer, Internal processes, Innovation/learning, and Financial. By monitoring the KPI's, management can assess how effectively their risk

mitigation efforts are working (Woods, M. 2008). Conventional BSC (Beasley, M.S., et al. 2006; Kaplan, R. S., Norton, D. P. 2007) can be integrated with EWRM to manage and monitor risk related to the strategic objectives (Sheehan, T.N. 2010).

Overall, the findings of this research question are indirectly supported in the literature review. It is also observed that respondents suggested that integration strategy of EWRM would be successful if it were put as one of the KPI into the Balanced Score Cards of the CEO and his senior and middle level the management team.

5.3 Contribution to Academia

EWRM studies have mainly been undertaken in the USA and West European Countries. This study contributes to the knowledge base by providing a section of work on EWRM framework perspectives based on an African Enterprise, and specifically linking EWRM implementation barriers to telecommunications enterprise.

This research helped fill the gaps in the literature on EWRM implementation barriers in an African telecommunications enterprise. The findings and contributions of the study are presented in Table 5.1. The contributions are described with the following terminology term ‘to some extent’ which indicates that the findings have been noted and are linked somehow in the literature on EWRM. Value of this research is articulated by identifying the levels of contribution to the extension of knowledge obtained from this study. Included in the table is the extant literature on EWRM, which indirectly addresses some aspects of research questions in the case companies with respect to their current practice of EWRM. The research adds more insights to extend the knowledge base on EWRM.

Table 5. 1: Contribution of research findings

Research Question	Information is available in the literature on EWRM	Information is available from the findings of this research study
Research Question 1: What are senior executive and mid-level management perceptions and understanding of an EWRM system?	‘To some extent’: Somehow touched on, however, it was not possible to identify specifically from the literature how senior executive and mid-level management perceived and understood EWRM system.	Yes, this study shows that management team in the case companies of MTN Group demonstrated understanding and perception of EWRM as essential. It identifies the support for EWRM system arising from maturity of the case companies- 10 years of

Research Question	Information is available in the literature on EWRM	Information is available from the findings of this research study
		operation.
Research Question 2: What are the potential motivators for the implementation of EWRM?	‘To some extent’ Touched on aspects of EWRM where it is stated that it adds value when it restricted the likelihood of significant downside risks such as financial distress through better decision making which could appear to have an impact on profitability. This is not clearly specifying the key motivators.	Yes. This study identifies that most of the senior executives and the middle level management of both genders perceived the most common motivating factor to implement EWRM system to be the ‘Sustainability of future profitability’. This perception could as well be attributed to employee rewards based on short and long-term incentives, such as the performance system of bonus payment based on profitability as one of the key performance areas. Additionally, the maturity of the cases- more than 10 years in operation; profitability performance of the cases is critically reviewed by the board of directors.
Research Question 3: What are the principal risks associated with introducing EWRM and how they may be managed.?	‘To some extent’ It suggests that from EWRM, management is able to consider all significant exposures, which can increase the firm’s capability to respond with a superior ability to the internal and external risks. it is further observes that there is little research that helps practitioners in assessing these risks, but much to gain from having a better understanding of these risks even if they cannot be quantified reliably.	Yes. Interviewees appreciate the challenges posed by a number of the principal risks as identified. EWRM can provide holistic view of these risks: how to control and mitigate them. The compromised information security and customer privacy was perceived as a principal risk that could have most company- wide impact across the three cases. This could be attributed to the industry sector of Information Communications Technology (ICT) in which MTN Group is operating

Research Question	Information is available in the literature on EWRM	Information is available from the findings of this research study
Research Question 4: Describe any anticipated barriers to implementation of EWRM.	‘To some extent: It indicates organizations were struggling with defining their programs, and to demonstrate the value of risk management. Taking EWRM approach was deemed a costly initiative. There were impediments to embracing EWRM which included competing priorities, insufficient resources, lack of perceived value, perception that EWRM adds bureaucracy and lack of board or senior executive EWRM leadership.	Yes. Interviewees agree with the anticipated barriers to EWRM implementation in their respective Sub-cases. However, bureaucratic barrier factor was not perceived a major factor to act as a barrier to implementation in case companies of MTN Group. Board of directors is fully in support of EWRM implementation.
Research Question 5: Would knowledge sharing and enhanced communication assist in overcoming the barriers?	‘To some extent; Somehow touched on most of the barriers, however, it was not possible to identify from the literature how enhanced communication would assist in practical manner the overcoming of barriers to EWRM implementation.	Yes, interviewees agreed that for an effective knowledge sharing and enhanced communication process to overcome the barriers of EWRM implementation, people should be given a platform where they can share knowledge, reward them for knowledge transfer, and set up KPI for monitoring the success of knowledge sharing on EWRM.
Research Question 6: What strategies could be adopted to overcome the implementation barriers associated with EWRM?	‘To some extent: There are no clearly stated key strategies to be adopted to overcome the implementation barriers associated with EWRM and how successful they might be?	Yes. The strategies identified to be adopted to overcome the implementation barriers associated with EWRM, included involvement of the board of directors, and the setting KPI in the balanced score cards for the management team to implement EWRM. Use of posters & fliers, emails and intranet as awareness campaign channels.

Developed for this study.

Contributions to Academia

There are specific contributions as extensions to the knowledge base in the field of EWRM arising from this study:

1. This is the first research that investigates the implementation barriers associated with introduction of EWRM in an African Telecommunications Enterprise.
2. This research helped to identify motivators for implementation of EWRM, where most of the senior executives and the middle level management of both genders perceived the most common motivating factor to implement EWRM to be the ‘sustainability of future profitability’. This perception could as well be attributed to employee rewards based on short and long-term incentives, such as the performance system of bonus payment based on profitability as one of the key performance areas.
3. From EWRM perspective, the compromised information security and customer privacy was perceived as a principal risk that could have most company- wide impact across the three cases. This could be attributed to the industry sector of Information Communications Technology (ICT) which MTN Group is operating. ICT is far integrated in all aspects of economy in the countries where the case companies are operating.
4. For an effective knowledge sharing and enhanced communication process for overcoming the EWRM implementation barriers: people should be given a platform where they can share knowledge, reward them for knowledge transfer, and set up KPI for monitoring the success of knowledge sharing on EWRM.
5. The strategies adopted to overcome the implementation barriers associated with introduction of EWRM included involvement of the board of directors, and the setting KPI in the balanced score cards for the management team to implement EWRM. Use of posters & fliers, emails and intranet as awareness campaign channels.

5.4 Implications for Practice.

Below is the summary of the suggestions to the senior management of case companies on how they can overcome the implementation barriers associated with introduction of EWRM along with thoughts that underpin a strategy for implementation. Proposed activity priority list on the EWRM implementation is presented in table 5.2.

1. There is a need to enhance knowledge sharing and communication process in the case companies, as this would assist in overcoming the implementing EWRM barriers. Use of communications channels for the process would include: processes, policies and

procedures (PPPs) which would be available and shared across the cases, the use of MTN academy's e-Learning and make available the study materials on EWRM, make recognition for sharing knowledge on risks, use the company boards which may be mounted in the specified locations, set up forums where staff members can exchange ideas on EWRM issues, and use other MTN IT resources such as email system, Intranet and the MTN portals. People should be given a platform where they can share knowledge, reward them for knowledge transfer, and set up KPI for monitoring the success of knowledge sharing on EWRM.

2. There are suggested strategies that can be adopted to overcome the implementation barriers such as the involvement of the board of directors; where directors would set KPI for the management team to implement EWRM. Use of scenario analysis of the risks which could be a part of competitive advantage strategy as it would compel the CEO and the management team to question their plans from the implementation of EWRM perspective. Take a strategy of identification and modeling risks that would be used to evaluate the model by analyzing and carrying out business case for each risk against the benefits to be derived at the enterprise -wide level. A strategy of looking beyond a compliance mindset would succeed if it is tied to the performance of the management team: based on bonus awards on those differentiating solutions implemented across the organization. Integration strategy of EWRM would be successful if it was put as one of the KPI and also included into the balanced score card of the CEO and the management team and further be enhanced through the CEO road shows. Risk awareness and communication are both critical across the organization in the campaign to implement EWRM; success could be registered by use of posters & fliers, emails and intranet as awareness campaign channels” and devising KPI around the successful EWRM implementation. These initiatives would apply as strategies which could be adopted to overcome the implementation barriers associated with EWRM
3. There is a need to make an awareness campaign across the MTN group with respect to who should take the overall responsibility for the implementation of EWRM.
4. There is a need to make it known across the MTN group, the difference between the internal audit and risk management, so as to avoid the EWRM implementation barriers that may arise. This was identified in the research question 1.

5. Management of Organizational culture as strategy for EWRM implementation: Management will have to effectively manage the organizational culture. It has been found as a barrier for managing and exploiting risk (Tillinghast-TowersPerrin, 2000) and a challenge towards EWRM implementation. Kleffner, A.E., et al. (2003b) found that the organizational culture and overall resistance to change were among the reasons why EWRM could not be successfully implemented.
6. People involvement strategy; it has been mentioned in the EWRM framework, that EWRM involves all people at all levels of the organization. Thus, to ensure a successful EWRM implementation, the organization should have the right people at the right position with diverse backgrounds and from different functions (Stroh, P.J. 2005) who have high skills, knowledge and experience.
7. Corporate Governance Compliance strategy: compliance is considered as an essential complement to EWRM implementation, and for effectiveness an enterprise requires a strong reinforcement of compliance systems. Corporate governance is vital for effective EWRM implementation, none of the EWRM components can be achieved without corporate governance compliance (Rosen, D., Zenios, S.A. 2001). The integration between corporate governance, risk management, and compliance are essential in order to achieve enterprise objectives and maximize shareholder value (Manab, A.N; et al. 2010).
8. Resource strategy, EWRM implementation requires appropriate resources such as people, processes and technologies. Limitation of resources has been cited as one of the reasons many organizations fail to develop an effective EWRM program (Meier, R.L. 2000). Quality personnel having appropriate knowledge, skills, and dedication are considered critical resource in managing risks. Processes are also very important factors in enabling management to conduct their obligations effectively within the risk management framework. By having the right people who understand the company's strategic direction, customer needs, have smooth processes, and using appropriate technology; EWRM implementation would be easy. DeLoach, J.W. (2000, Pp.41) observed:

“the more mature a firm's capabilities in terms of the skilled people, the process and the supporting methodologies and technology committed to business risk management, the more steps the firm can realistically expect to take along the pathway to EWRM”.
9. Knowledge sharing as a strategy for EWRM implementation: has been highlighted as an important factor for effective EWRM implementation in the study. Knowledge

- management which is about the sharing information on risks and its management, once shared among the community of staff in the organization, the information will be used in the improvement, effectiveness and the efficiency of risk management practices.
10. The delegated authority strategy: authority is an important factor for successful EWRM implementation. Internal auditors need to be given authority and power by the board to enforce the compliance on behalf of board directives; to check and report on the level of management of EWRM implementation in the enterprise.

Table 5. 2: Proposed Activity Priorities on the EWRM Implementation

Activity	Phases	Requirements	Time
1. Awareness campaign across the cases	1	Establishing a core team with representation from business units and key support functions, including strategic planning. Talk all about the EWRM- use of E-mail discussion groups, letters from the CEO, broadcast e-mails, use of MTN academy's e-Learning and make available the study materials on EWRM.	Initially four-six months, monitor and re-campaign from time to time as and when needed.
2. Involvement of the board of directors	1	Management understands and accepts its responsibility for identifying, assessing and managing risk. Senior Management and business unit management are strategically focused on the EWRM. Leading tools and processes are provided to the businesses to facilitate achievement of their Risk Management responsibilities. Business unit risk assessments are performed periodically and completely.	Repeatable/ as and when needed
3. Use of communications channels	1	E-mail discussion groups, letters from the CEO, broadcast e-mails, broadcast voice mails, corporate newsletters, and Intranet sites capturing information regarding EWRM.	Continuous/ as and when needed
4. Management of Organizational culture	1	Committed executive leadership and senior managers that model the EWRM culture they wish to see in the organization; there should be incentives that reward risk awareness among departments, teams and employees to establish EWRM thinking. There should be adequate Information sharing and communication among departments and teams, and learning opportunities for employees.	Continuous/ as and when needed
5. People involvement strategy	2	Have an adequate number of people on the EWRM team from different business units (champions) to facilitate risk workshops, help executives and business units understand their risks, gather data across the organization, and assist in reporting risks upwards to senior executives and the board. Use common language; quality people assigned; define tasks; and see that EWRM Initial infrastructure elements are available.	Repeatable/ as and when needed

Activity	Phases	Requirements	Time
6. Resource strategy	2	Make assessment to determine the people, technology, and process capabilities already in place and functioning, as well as new capabilities that need to be developed. This includes defining roles and responsibilities, and modifications to the organizational model, policies, processes, methodologies, tools, techniques, information flows, and technologies	Continuous/ as and when needed
7. Knowledge sharing as a strategy	2	<p>Avoid the barriers mentioned in the study which make it difficult for Knowledge sharing strategy for EWRM implementation, Risk knowledge sharing can be negatively influenced by business silos.</p> <p>Should appreciate and understand the value of people interaction and technological support in an EWRM program that implies multiple disciplines, profiles, groups of people with different knowledge and experiences working together.</p> <p>Knowledge and knowledge exchange, should allow: social interaction among the risk management employees and shared risk modeling experience; merging, categorizing, reclassifying and synthesizing the risk modeling processes; articulation of best practices and lessons learned in the risk modeling processes; internalization-learning and understanding from discussions and reviews.</p> <p>EWRM should be a multidisciplinary work, interdepartmental development and should allow a holistic view of risk across the organization; this requires knowledge dissemination and distribution in order to support individuals, groups, organizations and inter-organizations to develop Risk Management capacity.</p> <p>Appreciate knowledge sharing as critical in EWRM implementation, it will be influenced by these factors: business context, organizational structure and roles, business processes, motivation, means, ability of leadership, human networks, organizational culture and learning processes.</p>	Repeatable/ as and when needed
8. Corporate Governance Compliance strategy	2	There should be code of conduct which provides guidelines to the organizations with the expected standards of behavior regarding fraud, customer service, stakeholders' requirements, and company's performance reporting system.	Repeatable

Activity	Phases	Requirements	Time
9. The delegated authority for monitoring	3	Internal auditors need to be powered by the board to enforce the compliance and monitoring and report on the level of management of EWRM implementation in the enterprise. Will continually review and strengthen risk management capabilities as part of its ongoing management process.	Monthly/ as and when needed

Source: Developed by the author

5.5 Limitations

Certain weaknesses of this study can be attributed to the case study research methodology. In Chapter Three, Sections 3.9; Yin, R.K. (2009) identified a number of known limitations of the case study research methodology as: lack of generalization, perceived lack of rigor, subjectivity, and voluminous documents. However, the methodology was justified, along with the criteria for judging the quality design in Section 3.4.

This study is an exploratory case study with a limited sample size of a three multiple-embedded Sub-cases of the single case company. Therefore, the findings cannot be generalized beyond the context of this study. The goal of this research effort is to seek greater understanding that can lead to building a foundation for more extensive research in the future. Although respondents' responses were triangulated and accepted in this study, however, one cannot be certain that intended actions and perceptions would not be different upon the introduction of the EWRM system. However, the above aspects do not represent any limitations for the research. Next Section discusses the direction for further research.

5.6 Directions for Future Research

This research employs the case study method that relies primarily on an inductive approach to obtain data for analytical generalization rather than statistical generalization. Thus, the focus of this research is theory building and analytical generalization. It is recommended that further research should test this theory using a larger sample and use a more quantitative research method for the purpose of statistical generalization. It may be noted that qualitative and quantitative methods are complementary to each other and enhance investigation findings (Zikmund, W.G. 1997) and was adopted for purposes of this study.

In this research, one African telecommunication case company with its Sub-case companies has been studied. Future research can extend research into other telecommunication companies in Africa and other geographical areas. With globalization creating a borderless

phenomenon, research about perceived EWRM implementation barriers in countries in Asia, Europe, and USA, could lead to potential consolidation of strategies that could be adopted to overcome the implementation barriers associated with EWRM.

Future research can also attempt to understand if there are different perceptions and understanding of EWRM based on gender and age of the respondents in the telecommunications companies. If the difference can be confirmed then it can lead to a set of recommendations and strategies on how companies can overcome the EWRM implementation barriers.

Future research can attempt to understand if specifically overcoming EWRM implementation- barriers, would strategically contribute to competitive advantage and business success.

There is also scope for research to be done in industries that were not investigated in this study, such as consumer and other service sector companies, for example in the utilities- electricity companies. Comparison can be made between the industries to understand if EWRM implementation barriers are similar or different across the board, and this can be done from different countries. Such learning can help various industries develop EWRM strategies that would overcome implementation barriers; and this could lead to competitive advantage and business success.

5.7 Conclusion

This chapter concludes the study by comparing the findings of the six research questions with the literature. It has outlined contributions to the knowledge base where a number of contributions have been suggested. Implications for practice within the firm have been discussed. The chapter concludes by suggesting limitations of the study and proposing directions for future research.

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